

INCH-POUND
MIL-DTL-32200
14 December 2005

DETAIL SPECIFICATION

COVER, ADVANCED COMBAT HELMET

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

1. SCOPE

1.1 Scope. This document covers the requirements for a helmet cover that is worn over the Advanced Combat Helmet (ACH).

1.2 Classification. The helmet covers will be of the following types and classes as specified in 6.2.

Type I – Without Communications Flap
Class 1 – Woodland Camouflage Pattern
Class 2 – Snow Camouflage, White Artic
Class 3 – Desert Camouflage Pattern
Class 4 – Universal Camouflage Pattern

Type II – With Communications Flap
Class 1 – Woodland Camouflage Pattern
Class 2 – Snow Camouflage, White Artic
Class 3 – Desert Camouflage Pattern
Class 4 – Universal Camouflage Pattern

1.3 Schedule of sizes. The helmet cover is constructed in the following sizes (see 6.2).

SCHEDULE OF SIZES

Small/Medium
Large/Extra Large

Comments, suggestions, or questions on this document should be address to: Defense Supply Center Philadelphia, Clothing and Textiles Directorate, Attn: DSCP-COET (Bldg 6), 700 Robbins Ave., Philadelphia, PA 19111-5092 or emailed to James.Heiman@dla.mil. Since contact information can change, you may want to verify the currency of this address information using the ASSIST online database at <http://assist.daps.dla.mil>.

MIL-DTL-32200**2. APPLICABLE DOCUMENTS**

2.1 General. The documents listed in this section are specified in sections 3 and 4 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 documents cited in sections 3 and 4 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 document to the extent specified herein. Unless otherwise specified, the issues of these documents are those listed in the solicitation or contract (see 6.2).

FEDERAL SPECIFICATIONS

V-T-295 - Thread, Nylon

COMMERCIAL ITEM DESCRIPTIONS

A-A-50199 - Thread, Polyester Core, Cotton or Polyester-Covered
A-A-55126 - Fastener Tape, Hook and Loop, Synthetic

DEPARTMENT OF DEFENSE SPECIFICATIONS

MIL-C-44031 - Cloth, Camouflage Pattern: Woodland, Cotton and Nylon
MIL-C-44034 - Cloth, Twill, Camouflage Pattern, Cotton and Nylon for Desert Uniform
MIL-DTL-32072 - Thread, Polyester
MIL-DTL-32075 - Label: For Clothing, Equipage, and Tentage, (General Use)
MIL-DTL-44431 - Cloth, Plain Weave, Nylon Filament, Lightweight
MIL-PRF-5038 - Tape, Textile and Webbing, Textile, Reinforcing, Nylon

(Copies of documents are available online at <http://assist.daps.dla.mil> or from the Standardization Documents 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.

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

2-1-1516 - 4 Color Woodland Pattern
2-1-2240 - 3 Color Desert Pattern
2-1-2519 - Universal Camouflage, ARPAT, 3-Color
2-1-2519-1 - Universal Camouflage, ARPAT, Desert Sand 500
2-1-2519-2 - Universal Camouflage, ARPAT, Urban Gray 501
2-1-2519-3 - Universal Camouflage, ARPAT, Foliage Green 502

MIL-DTL-32200

(Copies of drawings, publications, and other Government documents required by contractors in connection with specific acquisition functions should be obtained from the contracting activity.)

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

AMERICAN SOCIETY FOR QUALITY

ANSI/ASQ Z1.4 - Sampling Procedures and Tables for Inspection by Attributes

(Copies of documents are available online at www.asq.org or from the American Society for Quality Control, 600 Plankinton Avenue, Milwaukee, WI 53203.)

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM D-6193 - Standard Practice for Stitches and Seams

(Copies of documents are available online at www.astm.org or from the American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19426-2959.)

AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS (AATCC)

AATCC-61 - Colorfastness to Laundering, Home and Commercial: Accelerated

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

(Non-Government standards and other publications are normally available from the organizations that prepare or distribute the documents. These documents also may be available in or through libraries or other informational services.)

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 4.2 and 6.3).

3.2 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 requirements of this document and promotes economically advantageous life cycle costs.

3.3 Design. The cover is designed to fit over the Advanced Combat Helmet (ACH). Four classes provide different covers for use in the woodland, arctic and desert environments. The cover provides the helmet with signature reduction in the visible and near infrared spectral ranges, which provides against detection by visual observation or through passive night vision devices.

MIL-DTL-32200

The cover contains buttonholes that allow for the attachment of indigenous plant material and other camouflage enhancing aids. The cover also provides noise reduction (softening noise if the helmet strikes an object). The Type II covers have a communications flap in the rear. The communications flap is used to store cables from the headset-microphone that is sometimes used with the helmet. Figure 1 is an illustration of the communications flap to supplement the information in the patterns.

3.3.1 Basic material.

3.3.1.1 Class 1 (woodland). The basic cloth for the woodland camouflage cover shall be Cloth, Camouflage Pattern: Woodland, Cotton and Nylon in accordance with MIL-C-44031, Class 1.

3.3.1.2 Class 2 (artic). The basic cloth for the snow camouflage cover shall be Cloth, Plain Weave, Nylon Filament, Lightweight conforming to MIL-DTL-44431.

3.3.1.3 Class 3 (desert). The basic cloth for the desert camouflage cover shall be Cloth, Twill, Camouflage Pattern, Cotton and Nylon for Desert Uniform conforming to MIL-C-44034, Class 3.

3.3.1.4 Class 4 (universal). The basic cloth for the universal camouflage cover shall be Cotton/Nylon blend twill as specified in MIL-C-44031, Class 1, except as otherwise specified in this document.

3.3.1.4.1 Class 4 pattern execution (universal). The universal camouflage shall be in accordance with drawing number 2-1-2519 and accurately match the Desert Sand 500, Urban Gray 501, and Foliage Green 502 shades and patterns.

3.3.1.4.2 Class 4 spectral reflectance (universal). The universal pattern print finished cloth shall meet the spectral reflectance values (in percent) for the visible/near infrared wavelength range, 600 to 860 nanometers (nm) for the colors specified in Table I, when tested as specified in paragraph 4.5.1 of MIL-C-44031.

Table I – Spectral reflectance requirements (universal).

Infrared Reflectance Requirements (percent)						
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	12	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

MIL-DTL-32200

3.3.2 Fastener tape, hook and loop. The hook and loop fastener tape for the retaining tabs and the IFF tab shall be 1 inch wide and conform to Type II, Class 1 of A-A-55126. The hook and loop fastener tape for the communications flap shall be 5/8 inch wide and conform to Type II, Class 1 of A-A-55126. The tape colors used shall be Camouflage Green 483, Light Tan 492, White, and Foliage Green 504. The color of the tape shall be as specified in 3.6.1 and 3.6.2. The patterns show separate hook and loop pieces sewn together for the retaining tabs. A “back-to-back” hook and loop product with hook on one side and loop on the other may be used on the condition that the piece meets the requirements of A-A-55126, Type II, Class 1.

3.3.3 Webbing. The webbing for the IFF tab shall be 1 inch wide and conform to Type III of MIL-PRF-5038. The tape colors used shall be Camouflage Green 483 for Class 1 covers, White for Class 2 covers, Light Tan 492 for Class 3 covers and Foliage Green 504 for Class 4 covers.

3.3.4 Identification friend or foe (IFF) (Glint) tape. The material for the IFF tape, also known as glo-tape or glint tape shall be Night Vision Equipment Company IFF-55 sewn-on infrared reflective glo-tape, Ominglow, Part Number 9-30142, TVI, Part Number 2B with knit, Supply Captain, Part Number 3999-NV or equal. The finished size of the IFF tape shall be 3/4-inch by 3/4-inch square.

3.3.5 Thread. The thread shall conform to either A-A-50199, Type I or Type II size 50/2 for the needle and looper (bobbin) or size B of V-T-295, Type I or II, Class A, Thread Nylon or MIL-DTL-32072, Type I or II, Class 1, Size B, Thread Polyester. As an alternative for looper (bobbin) thread size 70/2 or size AA may be used. The buttonhole thread shall be size 50/2 of A-A-50199, Type I or II or Size B of V-T-295, Type I or II, Class A. All thread shall be non-staining and show good colorfastness to laundering when tested according to AATCC-61, Test 3A (4 cycles). The thread colors used shall be Camouflage Green 483, Light Tan 492, White and Foliage Green 504 (see 3.4.2).

3.4 Construction.

3.4.1 Stitches and seams. All the stitching and seam types shall conform to ASTM D-6193 and the stitch and seam types listed in Table II. Each row of stitching shall be straight and parallel to the seam. The thread tension shall be maintained so that there shall not be any loose or tight stitching and the lock shall be embedded in the materials sewn together. No seam or component shall be twisted, puckered, or pleated and no part of the helmet cover shall be caught in an unrelated operation or seam. All material shall be clean finished, edges shall be turned in, turned under, or surged. Seams shall be sewn such that there are no raw edges, run-offs, or open seams. All seams shall start and finish evenly. To maintain durability and functionality the seams shall be sewn with 10-14 stitches per inch for all outside visible stitching. Overedging shall be 16-18 stitches per inch. The edge and topstitching shall be uniformly gauged. Stitch gauge (the distance from stitch to edge of fabric) shall be a minimum of 1/16-inch for the hook and loop fastener tape and the label. The stitch gauge for all other edge stitching shall be a minimum of 1/8-inch. The patterns provide for a 3/8-inch seam allowance for all joining seams, except double lapped seams, which have 5/8-inch seam allowance.

3.4.2 Manufacturing requirements. Unless otherwise specified, the helmet cover shall be manufactured in accordance with the requirements in Table II.

MIL-DTL-32200**TABLE II – Construction.**

<u>Operation</u>	<u>Seam Type</u>	<u>Stitch Type</u>
Overall general stitching (topstitching) <u>1/</u>	SSa-1	301
Sides (2) to center crown <u>1/</u>	SSa-2	515, 516, 517, 518, or 519
Joining facings <u>1/</u>	LSc-2	301 or 401
Outside edge facing (serging) <u>1/</u>	EFd-1	502, 504, 505
Facing to cover unit <u>1/</u> a. Facing seam edge (serging) b. Topstitching on seam	SSa-2 Topstitch	515, 516, 517, 518, or 519 301
Tabs, join hook and loop back to back <u>2/</u> , <u>5/</u>	SSa-1 with topstitching	301
Stitch tabs to facing so that tab overlaps facing 3/8 inch (+ 1/8, -0) <u>2/</u>	LSa-1 with topstitching Bartack full width of tab	304 301 or 401
Buttonhole <u>1/</u> a. Facing b. Crown/side crown	<u>3/</u> 3/	301 or 401 301 or 401
Communications facing to crown <u>1/</u> a. 1-3/4 (\pm 1/8) inch X 2-3/4 (\pm 1/8) inch finished main opening	SSc	301
Communications flap to crown <u>1/</u> , <u>4/</u> a. 4-1/2 (\pm 1/8) inch flap b. Tuck top portion of flap 2-1/2 (\pm 1/8) inch width c. Attach flap	EFb -- LSbj-1	301 -- 301
Communications flap loop to communications flap <u>1/</u>	LSbj-1	301
Communications flap hook to crown <u>1/</u>	LSbj-1	301
IFF (Glint) Tape to Crown or Side <u>1/</u>	LSbj-1	301 - Bartack
IFF (Glint) Loop to Crown or Side <u>1/</u>	LSbj-1	301 - Boxstitch or Box-X
IFF (Glint) Tab to Crown or Side <u>1/</u>	Bsa-1	301 - Bartack
IFF (Glint) Hook to IFF (Glint) Tab <u>1/</u>	LSbj-1	301 - Bartack
Label if sewn <u>1/</u>	LSbj-1	301

1/ Using Camouflage Green thread on the Class 1 cover, White thread on the Class 2 cover, Light Tan thread on the Class 3 cover, and Foliage Green on the Class 4 cover.

2/ Use Camouflage Green thread on the Class 1, Camouflage Green or White thread on the Class 2, Light Tan thread on the Class 3 cover, and Foliage Green on the Class 4 cover. Thread color shall match tab color.

3/ Buttonholes shall be stitched with no empty gaps and no fraying.

4/ Topstitch flap at 2-1/2 (\pm 1/8) inch finished width 2-1/2 (\pm 1/8) inch down from top of flap. Place small bartack or backstitch reinforcement at end of topstitch. Finish with boxstitch

MIL-DTL-32200

(2-1/2 (\pm 1/8) inch X 1/2 (\pm 1/8) inch) on top portion of facing using a 301 stitch. The finished length of the communications flap shall be 4-1/2 (\pm 1/8) inches.

5/ "Back to back" hook and loop fastener tape (tape made with loop on one side and hook on the other) may be used as an alternative to sewing hook tape to loop tape.

3.4.3 Figure. Figure 1 is furnished for information purposes only. When inconsistencies exist between the written specification and the figure, the written specification shall govern.

3.4.4 Buttonholes. The buttonholes in the cover shall be straight-cut, tacked at each end with a minimum of four crossover stitches. There shall be two lengths of buttonholes on the cover. There shall be a 1-inch buttonhole with a finished cut length of 3/4-inch (\pm 1/16-inch) and a 1-1/2 inch buttonhole with a finished cut length of 1-1/4 inch (\pm 1/16, - 0). The patterns show the finished cut length of the buttonholes. The buttonholes shall be clean-cut and correctly positioned with the stitching securely caught in the fabric. Each buttonhole shall be tacked at each end with a minimum of four crossover stitches. Buttonholes shall have a bite of no less than 1/16 inch and shall have a minimum of 52 stitches for the 1-inch buttonhole and 78 stitches for the 1-1/2 inch buttonhole.

3.4.5 Use of automated apparel equipment. Automated apparel equipment may be used to perform any operation, providing that the seam and stitch type are as specified and the finished component conforms to the required configuration. When a government furnished pattern is forwarded, the component shall conform to that pattern.

3.4.5.1 Thread ends. Unless otherwise specified all thread ends shall be trimmed to a length of not more than 1/4-inch.

3.4.5.2 Fusing of ends of webbing. All ends of the webbing shall be fused. The apparatus used to fuse the webbing ends shall be capable of providing sufficient heat to provide a smooth edge. The cut ends of the webbing yarns shall be fused together.

3.5 Labels. Each helmet cover shall have a label sewn or printed on the cover. If a sewn label is used, it shall be white with black printing in accordance with MIL-DTL-32075, Type VI, Class 4 and located on the back facing on the inside. If a stamped label is used, it shall be in accordance with MIL-DTL-32075, Type IV, Class 4 and shall be located on the inside surface of the center crown between the two rows of 3/4-inch buttonholes laterally (side by side) and the front 1-1/2-inch buttonhole and the IFF (Glint) loop long longitudinally (front to back). The labels shall be legible. The label shall provide the item nomenclature, contract number, lot number, national stock number (NSN), size, and contractor's name.

3.5.1 Barcode label. Each helmet cover shall be individually bar-coded with a hanging tag label in accordance with MIL-DTL-32075, Type VIII, Class 17. The bar coding element shall be the 13 digit national stock number (NSN). There shall be a 12 digit universal product code (UPC) number assigned for the NSNs by the Government. The initials "UPC" must appear beneath the universal product code (UPC) code. The label shall be located so that it is completely visible on the item when it is folded and/or packaged as specified and shall cause no damage to the item.

3.6 Hook and loop tape placement.

3.6.1 Communications flap hook and loop tape color and placement. Hook and loop tape is required on the communications flap and crown facing for Type II helmet covers. The patterns show placement of the tape. One piece of loop tape, 1-3/4-inch long, is required on the communication flap. One piece of hook tape, 1-3/4-inches long is required on the crown. For Class 1 cover, the hook and loop tape shall be Camouflage Green in color. For Class 2 covers, the

MIL-DTL-32200

hook and loop tape shall be or White. For Class 3 covers, the hook and loop tape shall be Light Tan in color. For Class 4 covers, the hook and loop tape shall be Foliage Green in color.

3.6.2 Retaining tab hook and loop tape color and placement. Hook and loop tape is required for the seven retaining tabs located on the facing. The facing patterns indicate placement of the retaining tabs. Three tabs are located along each of the two facings. The seventh tab is located at the center back where the two facings join. The retaining tab shall be set so that the loop side faces the inside of the helmet when the cover is installed on the helmet. For Class 1, the hook and loop tape shall be Camouflage Green in color. For Class 2, the hook and loop tape shall be Camouflage Green or White. For Class 3, the hook and loop tape shall be Light Tan in color. For Class 4, the hook and loop tape shall be Foliage Green in color.

3.7 Repairs. Repairs such as mends, darns, or patches shall not be made to the cover.

3.8 Patterns. The government will furnish a complete set of patterns. The government pattern shall not be altered in any way and shall be used to create the contractor's working patterns. Minor modifications are permitted to the contractor's working pattern where necessary when using automatic equipment or production processes. These modifications shall not alter the appearance, serviceability or dimensional requirements cited in this document. The patterns provide for a 3/8-inch seam allowance for all joining seams, except double lapped seams which have 5/8-inch seam allowance. Fabric components shall be cut in accordance with the furnished patterns.

3.8.1 List of pattern parts. The patterns listed in Tables IIIa and IIIb are provided to insure that the pattern set is complete.

TABLE IIIa. List of pattern parts for Type I cover (Without Communication Flap).

Pattern Abbreviation (Small/Medium) (ACHNR_WOCF)	Pattern Abbreviation (Large/Extra Large) (ACHNR_WOCF)	Nomenclature	Number to Cut Per Helmet Cover
CRNWOCF_SM	CRNWOCF_LX	Crown without internal cutout for Communications Flap	1
SIDE_SM	SIDE_LX	Side	2
FACING_SM	FACING_LX	Facing	2
TABNRHK_AS	TABNRHK_AS	Non-Reversible Retaining Tab (Loop Portion)	7
TABNRLP_AS	TABNRLP_AS	Non-Reversible Retaining Tab (Hook Portion)	7
GLINT_TAPE	GLINT_TAPE	IFF (Glint) Tape	4
GLINT_LOOP	GLINT_LOOP	IFF (Glint) Loop	8
GLINT_HOOK	GLINT_HOOK	IFF (Glint) Hook	4
GLINT_TBWB	GLINT_TBWB	IFF (Glint) Tab	4

MIL-DTL-32200

TABLE IIIb. List of pattern parts for Type II cover (With Communication Flap).

Pattern Abbreviation (Small/Medium) (ACHNR_WCF)	Pattern Abbreviation (Large/Extra Large) (ACHNR_WCF)	Nomenclature	Number to Cut Per Helmet Cover
CRNWCF_SM	CRNWCF_LX	Crown with internal cutout for Communications Flap	1
SIDE_SM	SIDE_LX	Side	2
FACING_SM	FACING_LX	Facing	2
TABNRHK_AS	TABNRHK_AS	Non-Reversible Retaining Tab (Loop Portion)	7
TABNRLP_AS	TABNRLP_AS	Non-Reversible Retaining Tab (Hook Portion)	7
CMFLP_SM	CMFLP_XL	Communications flap	1
CMFLPFC_SM	CMFLPFC_LX	Communications facing	1
CMFLPHK_AS	CMFLPHK_AS	Communications flap hook	1
CMFLPLP_AS	CMFLPLP_AS	Communications flap loop	1
GLINT_TAPE	GLINT_TAPE	IFF (Glint) Tape	4
GLINT_LOOP	GLINT_LOOP	IFF (Glint) Loop	8
GLINT_HOOK	GLINT_HOOK	IFF (Glint) Hook	4
GLINT_TBWB	GLINT_TBWB	IFF (Glint) Tab	4

3.9 Finished measurements. The finished measurements shall conform to Table IV when measured in accordance with 4.4.4.

TABLE IV - Finished measurements for helmet cover (inches).

Cover Size	Circumference (Tolerance)	Height (Tolerance)
Small/Medium	17 ($\pm 1/4$)	9-1/2 ($\pm 1/4$)
Large/Extra Large	18-1/8 ($\pm 1/4$)	10-1/8 ($\pm 1/4$)

TABLE V - Component measurements for helmet cover (inches).

Component	Dimension
Communications Flap Opening	1-3/4 ($\pm 1/8$) inch X 2-3/4 ($\pm 1/8$) inch
Communications Flap	4-1/2 ($\pm 1/8$) inch
Retaining Tabs	3 ($\pm 1/8$) inch
Buttonholes	As specified in 3.4.4

3.10 Workmanship. The finished cover shall conform to the quality of product established by this specification and the occurrence of defects shall not exceed the applicable acceptable quality levels.

MIL-DTL-32200**4. VERIFICATION**

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

1. First article inspection (see 4.2)
2. Conformance inspection (see 4.3)

4.2 First article inspection. When a first article is required (see 6.3), it shall be examined for the defects specified in 4.4.3 and 4.4.4 and tested in accordance with 4.4.5. Failure of any test or inspection shall be cause for rejection of the first article.

4.3 Conformance inspection. Unless otherwise specified, sampling for inspection shall be performed in accordance with ANSI/ASQ Z1.4. The lot size shall be expressed in units of helmet covers. The sample unit shall be one helmet cover. Samples selected shall be examined for the defects specified in 4.4.3 and 4.4.4. Acceptance criteria shall be as specified in the contract (see 6.4). Unless otherwise specified, a certificate of compliance will be acceptable as evidence that the requirements of 3.3.1 are met. When certificate of compliance are submitted, the Government reserves the right to inspect such items to determine the validity of the certification.

4.3.1 Component and material inspection. Components and materials shall be inspected in accordance will all the requirements of referenced documents unless otherwise excluded, amended, modified, or qualified in this specification or applicable contract.

4.4 Component and end item inspection. In accordance with 4.1, components and end items shall be tested in accordance with all the requirements of referenced documents unless otherwise excluded, amended, modified, or qualified in this document or applicable procurement documents. The government reserves the right to inspect all components and end items to determine conformance to requirements.

4.4.1 In-process inspection. Inspection of the sub-assemblies shall be made to ascertain that construction details, which cannot be examined in the finished product, are in accordance with specified requirements. The government reserves the right to exclude from consideration for acceptance any material or service for which in-process inspection has indicated non-conformance.

4.4.2 Examination of the end item. Examination of the end item shall be in accordance with 4.4.3 through 4.4.4.

4.4.3 End item visual examination. The end item shall be examined for the defects listed in Table VI.

TABLE VI - End item visual defects.

Examination	Defect	Classification	
		Major	Minor
Components and assembly	Any component caught in any unrelated operation of stitching (not otherwise classified herein)	101	
	Any component part omitted or not attached as specified (not otherwise classified herein)	102	
	Any exposed drill hole	103	

MIL-DTL-32200

TABLE VI - End item visual defects. Continued

Examination	Defect	Classification	
		Major	Minor
Cloth	Any hole, cut, or tear	104	201
	Any broken or missing yarns or multiple floats	105	
	Any mend, darn, or patch	106	
	Any needle chew	107	
	Any run, thin place, dye streak, misweave, knot or slub affecting appearance or serviceability		
	Any permanent fold, pleat, or crease affecting appearance or serviceability		
	Not as specified	108	
	Not cut in accordance with furnished pattern	109	
Fastener tape	Omitted, not specified type or color	110	
	Any hole, cut or tear	111	
	Hooks crushed affecting closure	112	
Webbing	Omitted, not specified type or color	113	
	Any hole, cut or tear	114	
	Not fused	115	
IFF (Glint) Tape	Omitted, not as specified	116	
	Any hole, cut or tear	117	
	IFF tape, loop, hook and tab not located properly so that the tab covers the tape and the hook and loop engages.	118	
Seams and stitching:			
Open seams	Up to and including 1/2-inch	119	203
	More than 1/2-inch		
	<u>NOTE:</u> A seam shall be classified as an open seam when one or more stitches joining a seam are broken, or when two or more consecutive skipped or runoff stitches occur.		
Raw edges (except where required or otherwise classified herein)	More than 1/4-inch when securely caught in stitching		204
	<u>NOTE:</u> Raw edges not securely caught in stitching shall be classified as open seams.		
Seam and stitch type	Wrong seam or stitch type	120	205
	Seam pleated or excessively puckered, distorted, pleated, wavy, or twisted, clearly noticeable		
Stitch tension	Tension loose, resulting in loose bobbin or top thread		206
	Tension excessively tight, resulting in puckering of material		207
Stitches per inch (all types of stitching)	One stitch less than minimum specified	121	208
	Two or more stitches less than minimum specified		209
	One or more stitches in excess of maximum specified		

MIL-DTL-32200

TABLE VI - End item visual defects. - Continued

Examination	Defect	Classification	
		Major	Minor
Stitches per inch (all types of stitching) (cont.)	NOTE: Variation in the number of stitches per inch caused by operator speeding up the machine and pulling the material in order to sew over heavy places, or in turning corners shall be classified as follows: - Within the minor defect classification – no defect - Within the major defect classification – minor defect		
Rows of stitching	Any row omitted Topstitching sewn too close to edge resulting in damage to cloth	122 123	
Thread breaks, skipped stitches or run-offs	Overstitched less than ¾-inch in each direction beyond the defective stitching area NOTE: On all types of stitching, thread breaks or two or more consecutive skipped or run-off stitches not overstitched shall be classified as open seams.		210
Stitching ends	Ends of stitching not secured as specified (except when caught in other stitching or turned under in a hem)		211
Buttonholes	On cover crown - Up to two omitted - Three or more omitted On cover facing - One or more omitted Stitches not securely caught in fabric, causing stitches to pull away from fabric One or more broken stitches or two or more skipped stitches Tack on one or both ends omitted Uncut Not specified type	124 125 126	212 213 214 215 216
Shade	Shade variation within a part or between parts Thread, cloth/material color not as specified	127 128	
Cleanness	Spot, stain, excessive thread ends not trimmed or removed, odor, affecting appearance or serviceability	129	
Labels	Omitted, incorrect, illegible, not as specified, or not attached where specified Attachment causes damage to the item Ends of material not seared Searing forms sharp edges Color not as specified	130 131	217 218 219
Barcode	Omitted or not readable by scanner Human readable interpretation (HRI) omitted Not visible on folded, packaged item Causes damage to the end item	132	220 221 222

4.4.4 End item dimensional examination. The end items shall be examined for conformance to all dimensions specified in Table IV and V. The measurements of the helmet cover shall be taken with the cover folded in half and laid flat with the bottom edges even. The circumferential

MIL-DTL-32200

measurements shall be taken from the center back facing seam along the contour of the helmet to the center front facing seam. The height measurement shall be taken from the top mid point of the center crown to the midpoint of the side-facing seam. Any dimension not within the specified tolerance shall be classified as a major defect. The lot size shall be expressed in units of helmet covers. The sample unit shall be one helmet cover.

4.4.5 Material and end item testing. Material and end item testing shall be performed in accordance with section 3 of this document. All tests reports shall contain the individual values utilized in expressing the final results. The cloth shall be tested for the characteristics listed in accordance with all the requirements of referenced documents. For material testing the sample unit shall be five continuous yards full width of the finished cloth, for all physical and chemical tests. The lot shall be considered unacceptable if one or more sample units fail to meet the requirements specified.

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 materiel is to be performed by DoD 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 activity within the Military Department or Defense Agency, or within the Military Department's System Command. Packaging data retrieval is available from the managing Military Departments 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 covers are intended for camouflaging the Advanced Combat Helmet.

6.2 Acquisition requirements. Acquisition documents should specify the following:

1. Title, number and date of this specification.
2. Issue of ASSIST to be cited in the solicitation and, if required, the specific issue of individual documents referenced (see 2.2.1 and 2.3).
3. Types, classes and sizes required (see 1.2 and 1.3).
4. When first article inspection is required, (see 3.1), the item will be tested and should be a first article sample. The contracting officer should include specific instructions in acquisition documents regarding arrangement for examinations, quantity, and testing and approval.
5. Packaging requirements (see 5.1).

6.3 First article. When a first article is required, it will be inspected and approved under the appropriate provisions of FAR 52.209-4. The first article should be a pre-production 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 all acquisitions documents regarding arrangements for selection, inspection, and approval of the first article.

6.4 Acceptance criteria. Acceptance criteria will be as specified in the contract or purchase order.

MIL-DTL-32200

6.5 National Stock Numbers (NSN).

Type I (Without Communication Flap)

8415-01-515-4289 – Class 2 (Artic Camouflage) – Small/Medium
8415-01-515-4290 – Class 2 (Artic Camouflage) – Large/Extra-Large
8415-01-521-8357 – Class 4 (Universal Camouflage Pattern) - Small/Medium
8415-01-521-8360 – Class 4 (Universal Camouflage Pattern) - Large/Extra-Large

Type II (With Communication Flap)

8415-01-515-4286 – Class 2 (Artic Camouflage) – Small/Medium
8415-01-515-4288 – Class 2 (Artic Camouflage) – Large/Extra-Large
8415-01-521-8806 – Class 4 (Universal Camouflage Pattern) - Small/Medium
8415-01-521-8808 – Class 4 (Universal Camouflage Pattern) - Large/Extra-Large

6.6 Subject term (key word) listing.

Helmet
Cover
Camouflage

6.7 Suggested Sources of Supply. The following are suggested sources of supply for the IFF Material.

Night Vision Equipment Company
P.O. Box 219
Fogelsville, PA

Omniglow Corporation
96 Windsor Street
West Springfield, MA 01089

TVI Corporation
7100 Holladay Tyler Road
Glen Dale, MD 20769

Supply Captain
141 Hillcrest Drive
Marlboro, NY 12542

MILITARY INTERESTS:

Custodians:

Army - GL
Air Force - 11
Navy – NU

Preparing activity:
DLA-CT

(Project 8415-0266)

Review activities:

Army - MD

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using ASSIST online database at <http://assist.daps.dla.mil>.

MIL-DTL-32200

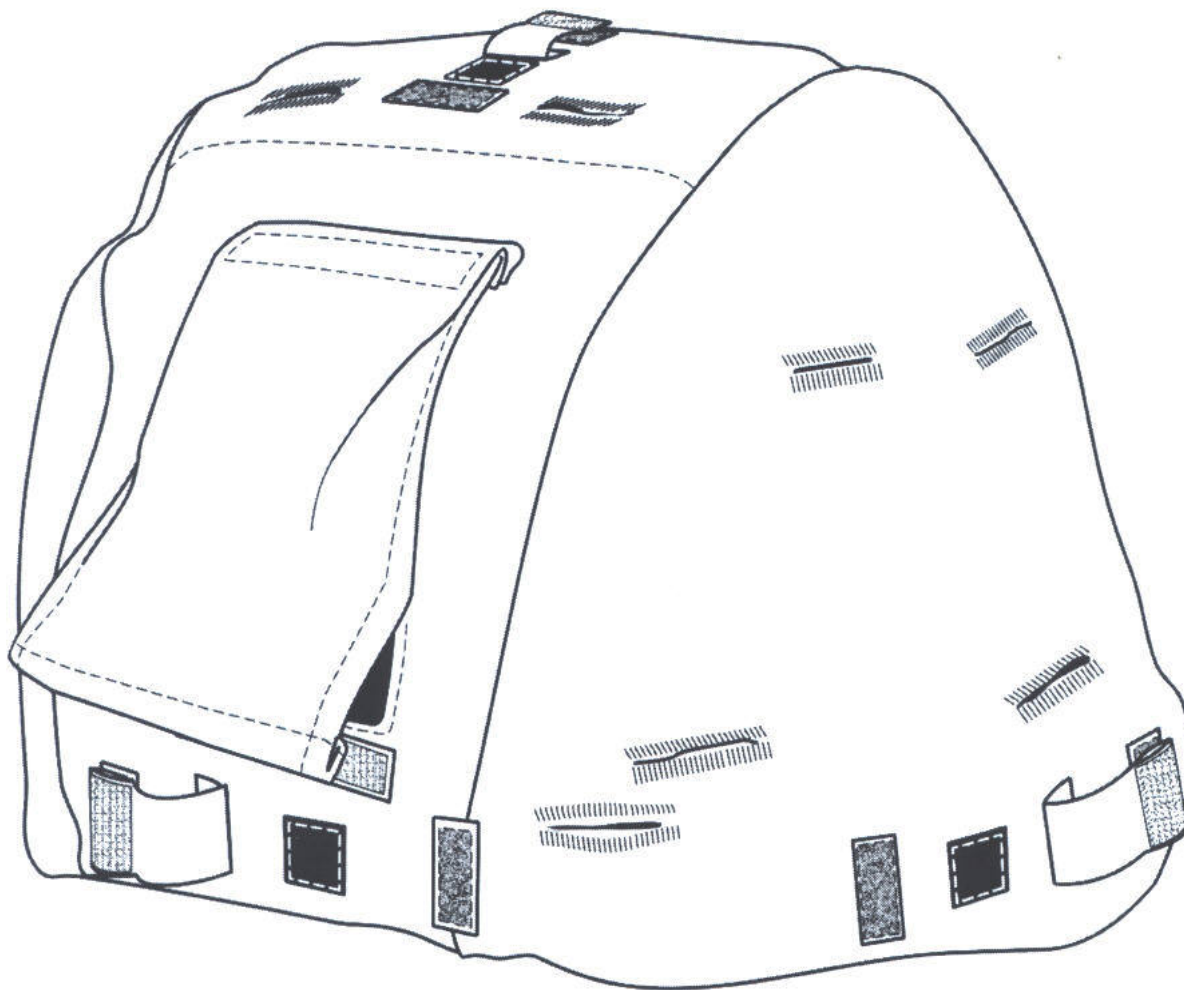


Figure 1
Cover, Advanced Combat Helmet