

MIL-H-29101B(NU)  
26 October 1981  
 SUPERSEDING  
 MIL-H-29101A(SA)  
 30 September 1975

## MILITARY SPECIFICATION

### HOODS, EXTREME COLD WEATHER, IMPERMEABLE

This specification is approved for use by the Navy Clothing and Textile Research Facility, Department of the Navy, and is available for use by all Departments and Agencies of the Department of Defense.

#### 1. SCOPE

1.1 Scope This specification covers the requirements for two types of cold weather hoods which incorporate a waterproof barrier outer material of coated nylon twill and a knitted nylon fleece lining.

1.2 Classification The hoods shall be of one size only and of the following types (see 6.2):

Type I - With ear pods (For use over sound powered ear phones or aural sound protectors)

Type II- For regular use

#### 2. APPLICABLE DOCUMENTS

##### \*2.1 Government documents

\*2.1.1 Specifications, standards, and handbooks Unless otherwise specified, the following specifications, standards, and handbooks of the issue listed in that issue of the Department of Defense Index of Specifications and Standards (DoDISS) specified in the solicitation, form a part of this specification to the extent specified herein.

#### SPECIFICATIONS

##### FEDERAL

V-T-295	- Thread, Nylon
CCC-C-419	- Cloth, Duck, Cotton, Unbleached, Plied-Yarns, Army and Numbered
DDD-L-20	- Label; For Clothing, Equipage, and Tentage (General Use)

Beneficial comments (recommendations, additions, and deletions) and any pertinent data which may be of use in improving this document should be addressed to: Officer in Charge, Navy Clothing and Textile Research Facility, 21 Strathmore Road, Natick, MA 01760 by using the self-addressed Standardization Documents Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

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### MILITARY

- MIL-B-543 - Buckles, Tongueless and Web Strap
- MIL-C-17155 - Cloth, Knitted, Nylon, Fleece
- MIL-B-17757 - Boxes, Shipping, Fiberboard (Modular Sizes)
- MIL-C-19759 - Cloth, Coated, Twill, Nylon (Low Count)
- MIL-F-21840 - Fastener Tape, Hook and Pile, Synthetic
- MIL-T-43566 - Tape, Textile, Cotton, General Purpose, Natural or in Colors

### STANDARDS

#### FEDERAL

- FED-STD-751 - Stitches, Seams and Stitchings

#### MILITARY

- MIL-STD-129 - Marking for Shipment and Storage
- \*MIL-STD-1667 - Provisions for Evaluating Quality of Hoods; Cold Weather, Extreme Cold Weather and Flyers

(Copies of specifications, standards, drawings and publications required by contractors in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer.)

### LAWS AND REGULATIONS

#### US POSTAL SERVICE MANUAL

(Copies of the manual may be obtained from the Superintendent of Documents, US Government Printing Office, Washington, DC 20402.)

\* 2.2 Other publications The following documents form a part of this specification to the extent specified herein. The issues of documents which are indicated as DoD adopted shall be the issue listed in the current DoDISS and supplement thereto, if applicable.

#### NATIONAL MOTOR FREIGHT TRAFFIC ASSOCIATION, INC., AGENT

##### National Motor Freight Classification

(Application for copies should be addressed to American Trucking Associations, ATTN: Traffic Department, 1616 P Street, NW, Washington, DC 20036.)

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## UNIFORM CLASSIFICATION COMMITTEE, AGENT

## Uniform Freight Classification

(Application for copies should be addressed to the Uniform Classification Committee, Room 1106, 222 South Riverside Plaza, Chicago, ILL 60606.)

## 3. REQUIREMENTS

3.1 Guide sample Guide samples, when furnished, are solely for guidance and information to the contractor (see 6.3). Variations from this specification may appear in the sample, in which case this specification shall govern.

3.2 First article approval When specified (see 6.2), the contractor shall furnish sample unit(s) for first article inspection and approval (see 4.3).

\*3.3 Materials (see 6.4)

3.3.1 Basic material The basic material shall be cloth, coated, nylon, twill, low count, conforming to type I of MIL-C-19759.

3.3.1.1 Binding The material used for the binding shall be of the basic material specified in 3.3.1, bias-cut on a 45 ( $\pm$  5) degree angle in strips 1 1/4 ( $\pm$  1/8) inches wide. The ends of the strips shall be joined by seam type SSa-1 and stitch type 301 of FED-STD-751 with 10 to 12 stitches per inch. The seams shall finish 1/8 to 3/16 inch wide and shall be spread open.

3.3.2 Lining The lining material shall be knitted nylon fleece conforming to type I of MIL-C-17155.

3.3.3 Thread The thread for seaming and stitching shall be nylon, conforming to types I, II, and III, size B, of V-T-295. The color shall be dyed to match the shade of the basic material.

3.3.3.1 Colorfastness The dyed thread shall show a minimum of "good" fastness to laundering and wet-dry cleaning when tested as specified in V-T-295.

3.3.4 Fastener tapes, nylon The matching hook and pile nylon fastener tapes shall be 2 inches wide conforming to type II, class 1 of MIL-F-21840. The color shall approximate the shade of the basic material.

3.3.5 Interlining The material for interlining the visor shall be unbleached cotton duck, size number 6, hard texture, conforming to type I of CCC-C-419. As an alternate, the interlining may be cut from unbleached cotton duck, size number 1, hard texture, conforming to Type I of CCC-C-419.

3.3.6 Buckle The buckle for the adjustment (take-up) strap assembly shall be 5/8 inch conforming to type II, style 3, class 1 or 3 of MIL-B-543. The color shall be black or green.

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3.3.7 Tape The tape for the adjustment (take-up) strap assembly shall be 5/8 inch conforming to type I, class 3 of MIL-T-43566. The color shall approximate the shade of the basic material.

3.3.8 Identification and instruction label Each hood shall have a combination identification and instruction label measuring approximately 2 1/2 inches in length by 3 1/2 inches in width conforming to type VI, classes 1 and 3 of DDD-L-20. The printing shall show fastness to laundering and wet-dry cleaning.

3.3.8.1 Type I hoods Type I hood labels shall bear the following inscription:

HOOD, EXTREME COLD WEATHER, IMPERMEABLE  
 CONTRACT NO: DLA-100-00-0-0000 (Example)  
 STOCK NO.: 8415-00-000-0000 (Example)  
 TYPE I - FOR USE WITH SOUND POWERED PHONES AND/OR AURAL SOUND  
PROTECTOR (Use other type for regular wear)  
 NAME OF CONTRACTOR:

Put on hood and secure adjustment (take-up) strap assembly to desired fit. Close around chin by overlapping and pressing the hook and pile fastener. Nose flaps should be closed to leave 1/2 inch space between nose and flaps. Fold nose protector flaps inside hood when not required.

Cleaning This hood should be laundered with water at a temperature below 140°F and tumble dried at a temperature below 160°F, or dry cleaned with Stoddard Solvent only.

3.3.8.2 Type II hoods Type II hoods shall bear the following inscription:

HOOD, EXTREME COLD WEATHER, IMPERMEABLE  
 CONTRACT NO: DLA-100-00-0-0000 (Example)  
 STOCK NO: 8415-00-000-0000 (Example)  
 TYPE II - DO NOT WEAR WITH SOUND POWERED PHONES OR AURAL SOUND  
PROTECTOR (Separate type available for this use)  
 NAME OF CONTRACTOR:

Put on hood and secure adjustment (take-up) strap assembly to desired fit. Close around chin by overlapping and pressing the hook and pile fastener. Nose flaps should be closed to leave 1/2 inch space between nose and flaps. Fold nose protector flaps inside hood when not required.

Cleaning This hood should be laundered with water at a temperature below 140°F and tumble dried at a temperature below 160°F, or dry cleaned with Stoddard Solvent only.

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**3.3.9 Adhesive shade tickets** Adhesive tickets, when used for shade marking, shall be of paper with a thermo-activated adhesive applied on one side. The adhesive shall not discolor the material and the adhesive mass shall not adhere to the material upon removal of the tickets.

**3.4 Design** The hoods shall be of a coated nylon fabric with the coating on the underside. The inside of the hood shall be lined with a knitted nylon fleece with the fleece exposed. The hoods shall have a visor, protective nose flaps, and a buckle-webbing adjustment (take-up) strap assembly. The front opening and protective nose flaps are secured by means of a hook and pile fastener. Type I hoods shall have ear pods to encase sound powered phones or aural sound protectors.

**3.4.1 Figures** Figures 1, 2 and 3 are furnished for information purposes only. To the extent of any inconsistencies between the written specification and the figures, the written specification shall govern.

**3.5 Patterns** Standard patterns will be furnished by the Government. The standard patterns shall not be altered in any way and are to be used for cutting the contractor's working patterns. The working patterns shall be identical to the standard patterns. The seam allowances are as specified for the particular operation indicated in Table I.

**3.5.1 Pattern parts** The component parts shall be cut from the material specified in accordance with the following pattern parts:

<u>Material</u>	<u>Pattern Parts</u>	<u>Cut Parts</u>	
		<u>Type I</u>	<u>Type II</u>
Cloth, Coated, Nylon, Twill	Hood, Side Piece	2	2
	Hood, Center Piece	1	1
	Neck Band	1	1
	Nose Protector (left and right)	2	2
	Visor Top Ply - Face up	1	1
	Visor Bottom Ply - Face up	1	1
	Ear Pods (left and right)	4	-
Cloth, Knitted Nylon Fleece	Hood, Side Piece	2	2
	Hood, Center Piece	1	1
	Neck Band	1	1
	Nose Protector (left and right)	2	2
Cloth, Cotton, Duck, No. 6	Visor Interlining 1/	2	2
Template	Visor Location Marker	-	-

1/ When alternate size No. 1 cotton duck is used, cut only one ply of interlining.

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### 3.6 Construction

3.6.1 Stitch, seam, and stitching types Stitch, seam, and stitching types specified in Table I shall conform to FED-STD-751. Wherever two or more methods for seam or stitch types are given for the same part of the operation, any one of them may be used. Where stitch type 401 is used, the looper or under-thread shall be on the inside of the hood. Seam allowances shall be maintained with seams properly sewn so that no raw edges, runoffs, twists, pleats or open seams result. Unless otherwise specified, edgestitching or outer rows of stitching shall be 1/16 inch from the edge.

3.6.2 Thread breaks and ends of seams Ends of all seams and stitchings shall be backtacked not less than 1/4 inch. The ends of a continuous line of stitching shall be overlapped not less than 1/2 inch. Thread breaks (all stitch types) shall be secured by stitching back of the break not less than 1/2 inch. Skipped stitches or 401 stitch type thread breaks may be repaired by using 301 stitch type.

3.6.3 Stitches per inch The minimum and maximum number of stitches per inch shall be as specified in Table I.

3.7 Manufacturing operations requirements The hoods shall be manufactured in accordance with the operation requirements specified in Table I. The contractor is not required to follow the exact sequence of operations listed provided that the finished hoods are identical to those produced by following the sequence of operations as listed in Table I.

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Table I - Construction of hoods

No.	Description of Operation	Stitch Type	Seam and Stitching Type	Stitches Per Inch	Thread	
					Needle	Bobbin or Looper
1.	<p><u>Cutting</u></p> <p>a. Cut the hoods in strict accordance with patterns which show shape; warp directional lines, and notches for the proper assembling of all parts.</p> <p>b. Cut all component coated twill parts out of one piece of material, except the loop, and binding, which may be cut from ends. When so cut, the parts shall closely match the main assembly.</p> <p>c. Cut all component nylon fleece parts from one piece of material.</p> <p>d. The uncoated side of the nylon twill and the fleece side of the lining shall be considered the face sides of the fabric.</p> <p>* e. Cut the nylon fastener tape as follows:</p> <p>(1) Pile tape</p> <p>-one piece 4 5/8 (+ 1/4) inches long for left front opening</p> <p>-one piece 3 1/4 (+ 1/8) inches long for the right side nose protector flap</p> <p>(2) Hook tape</p> <p>-two pieces 2 (+ 1/8) inches or one piece 4 5/8 (+ 1/4) inches long for right front opening</p> <p>-one piece 2 1/4 (+ 1/8) inches long for left side nose protector flap</p> <p>(3) Shape ends of each portion to conform with the contour of the bound edge.</p>					

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Table - Construction of hoods (cont'd)

No.	Description of Operation	Stitch Type	Seam and Stitching Type	Stitches Per Inch	Thread	
					Needle	Bobbin or Looper
1.	<p>Cutting (cont'd)</p> <p>f. Cut the cotton webbing as follows:</p> <p>Short strap (types I and II) - <math>3\frac{1}{2}(\pm\frac{1}{4})</math> inches long</p> <p>Long strap (type I) - <math>12\frac{1}{2}(\pm\frac{1}{2})</math> inches long</p> <p>Long strap (type II) - <math>11\frac{1}{2}(\pm\frac{1}{2})</math> inches long</p>					
*2.	<p><u>Replacement of defective components</u></p> <p>During the spreading, cutting and manufacturing process, components having material defects or damages that are classified as defects in MIL-STD-1667 shall be removed from production and replaced with non-defective and properly matched components.</p>					
3.	<p><u>Shade marking</u></p> <p>a. All component parts, except neckloop, binding and interlining shall be marked, bundled or ticketed to insure a uniform shade and proper assembly throughout the garment.</p> <p>b. The use of metal fastening devices or sewn-on tickets for shade marking is prohibited on the nylon twill only. Noncorrosive devices are permitted on the fleece.</p> <p>c. Adhesive type shade tickets, when used, shall conform to the requirements as specified in 3.3.9.</p>					

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Table I - Construction of hoods (cont'd)

No.	Description of Operation	Stitch Type	Seam and Stitching Type	Stitches Per Inch	Thread	
					Needle	Bobbin or Looper
3.	Shade marking (cont'd) d. The use of ink pad numbering machine, rubber stamp or pencil is allowed, provided the numbering does not show on the outside of the garment and whenever possible, is covered by the seam allowance.					
4.	Prepare neck loop a. Fold a $3\frac{1}{2}$ ( $\pm 1/4$ ) inch length of stripping in half lengthwise, face side out. Turn in raw edges parallel to the fold and stitch $1/16$ inch from edge. OR b. Fold stripping with the edges abutted at center and stitch with each row of stitching not less than $1/16$ inch from edge and the covering stitch on the underside. OR c. Fold stripping with both edges turned in and the turned-in edges abutted at center and stitch with a covering stitch. d. The finished loop strip shall measure $3/8$ ( $\pm 1/8$ ) inch wide.	301 or 401  406  105	EFp-2  EFh-1  EFae-1	10-14  10-14  10-14	III B or II B  III B or I B  III B or I B	III B I B  III B I B
5.	Prepare lining assembly and attach label a. Overedge stitch the ear openings of the hood side pieces. (Type I hood only). b. Join, $3/8$ inch from edge, face to face, the hood side and center seams. Press seams open and flat.	502 or 503  301 or 401	EFd-1  SSa-1	10-14  10-14	III B or II B  III B or II B	III B I B  III B I B

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Table I - Construction of hoods (cont'd)

No.	Description of Operation	Stitch Type	Seam and Stitching Type	Stitches Per Inch	Thread	
					Needle	Bobbin or Looper
5.	<p>Prepare lining assembly and attach label (cont'd)</p> <p>c. Center the identification-instruction label on the fleece side of the hood center piece with bottom edge of label <math>3/8</math> to <math>1/2</math> inch above the lower edge of the hood center piece. Stitch, <math>1/16</math> inch from edge, the four sides of the label.</p> <p>d. Join, <math>3/8</math> inch from edge, the neckband to the assembled hood pieces, simultaneously inserting and catching one end of the neck loop midway between the seams joining the hood center and side pieces. Press seam open and flat.</p>	301	LSbj-1	10-14	III B or II B	III B I B
		301 or 401	SSa-1	10-14	III B or II B	III B I B
6.	<p>Prepare nose protective flaps</p> <p>a. Stitch, <math>1/16</math> to <math>1/8</math> inch from edges, back to back, the top, bottom and rounded edges of the twill and fleece nose protector pieces.</p> <p>b. Position the <math>2\ 1/4</math> inch hook nylon fastener tape with the hooks running vertically, onto the fleece side of the left nose flap (as worn) aligning it in the corners <math>1/8</math> to <math>1/4</math> inch from the edges. Stitch the four sides <math>1/16</math> to <math>1/8</math> inch from the edges.</p> <p>c. Position the <math>3\ 1/4</math> inch pile nylon fastener tape onto the twill side of the right nose flap (as worn) aligning it in the corners <math>1/8</math> to <math>1/4</math> inch from the edges. Stitch the four sides <math>1/16</math> to <math>1/8</math> inch from the edges.</p> <p>d. Bind the raw edges of the joining seams and trim ends even with the slant (angular) edge. Binding shall finish <math>3/8</math> (<math>\pm 1/16</math>) inch wide with the raw edges securely caught in the</p>	301 or 401	SSa-1	10-14	III B or II B	II B I B
		301	LSa-1 each edge	10-14	III B or II B	II B I B
		301	LSa-1 each edge	10-14	III B or II B	II B I B
		301	BSc-1 or BSO-2	10-14	III B or II B	II B I B

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### Table I - Construction of hoods (cont'd)

No.	Description of Operation	Stitch Type	Beam and Stitching Type	Stitches Per Inch	Thread	
					Needle	Bobbin or Looper
6.	<p><u>Prepare nose protective flaps (cont'd)</u> OR</p> <p>e. The hook and pile fastener tapes may be positioned and attached during the binding operation prior to stitching the remaining unstitched sides.</p>					
7.	<p><u>Make visor</u></p> <p>a. Stitch together two plies of number 6 visor interlining with 3 or 4 equally spaced parallel rows of stitching to outer edge. OR</p> <p>b. Use omPLY of number 1 visor interlining with no stitching.</p> <p>c. Stitch, 3/16 to 1/4 inch from edge, the two nylon twill visor pieces face to face along the inner (concaved) edge.</p> <p>d. Turn twill visor pieces face side out, inserting the interlining between the plies so that the interlining is even with the outer curved (convexed) edge. Stitch through all plies 1/16 to 1/8 inch along the outer curved (convexed) edge to form the peak of the visor, trim excess interlining if necessary.</p> <p>e. Stitch 1/16 to 1/8 inch from folded edge along the inner (concaved) edge of the visor.</p> <p>f. Bind outer curved (convexed) edge of visor, using a seamless section of binding for each visor, leaving an extension of approximately 3/4 inch beyond each end. The binding shall finish 3/8 (+ 1/16) inch wide with the raw edges securely caught in the stitching.</p>	<p>301 or 401</p> <p>301 or 401</p> <p>301 or 401</p> <p>301 or 401</p> <p>301</p>	<p>SSv-3 or SSv-4</p> <p>SSa-2(a)</p> <p>SSa-1</p> <p>SSE-2(b)</p> <p>BSc-1 or BSO-2</p>	<p>8-10</p> <p>10-14</p> <p>10-14</p> <p>10-14</p> <p>10-14</p>	<p>III B or II B</p> <p>III B or II B</p> <p>III B or II B</p> <p>III B or II B</p> <p>III B or II B</p>	<p>III B I B</p> <p>III B I B</p> <p>III B I B</p> <p>III B I B</p> <p>III B I B</p>

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Table I - Construction of hoods (cont'd)

No.	Description of Operation	Stitch Type	Seam and Stitching Type	Stitches Per Inch	Thread	
					Needle	Bobbin or Looper
8.	Prepare ear pods (Type I hood).					
	a. Stitch darts on left and right ear pods as indicated by pattern cut out with seam tapering to a point	301 or 401	LSq-2(a)	10-14	III B or II B	III B or I B
	b. Turn seams toward center of ear pod and raise stitch 1/16 inch from the edge.	301 or 401	LSq-2(b)	10-14	III B or II B	III B or I B
	c. Join, 1/4 to 3/8 inch from edge, the ear pod halves, matching darts.	301 or 401	LSq-2(a)	10-14	III B or II B	III B or I B
9.	d. Turn seam allowance towards back half of ear pod and raise stitch 1/16 inch from edge.	301 or 401	LSq-2(b)	10-14	III B or II B	III B or I B
	Prepare twill headpiece assembly					
	a. Join, 1/4 to 3/8 inch from edge, face to face, the hood side and center pieces.	301 or 401	LSq-2(a)	10-14	III B or II B	III B or I B
	b. Turn seam allowance toward center piece and raise stitch 1/16 inch from edge.	301 or 401	LSq-2(b)	10-14	III B or II B	III B or I B
	c. Join, 1/4 to 3/8 inch from edge, the assembled ear pods to the side pieces as indicated by the pattern cut out. (Type I hood only).	301 or 401	LSq-2(a)	10-14	III B or II B	III B or I B
	d. Turn seam allowance in, to lay on ear pod and raise stitch 1/16 inch from edge. (Type I hood only).	301 or 401	LSq-2(b)	10-14	III B or II B	III B or I B
	e. Join, 1/4 to 3/8 inch from edge, the neckband to the assembled headpiece assembly.	301 or 401	SSa-1	10-14	III B or II B	III B or I B

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Table I - Construction of hoods (cont'd)

No.	Description of Operation	Stitch Type	Seam and Stitching Type	Stitches Per Inch	Thread	
					Needle	Bobbin or Looper
10.	Join twill and lining assemblies					
*	a. Turn seam allowance joining the twill neckband-headpiece assembly upward.					
	b. Position the twill and fleece assemblies even at the neckband edge.					
	c. Join the two assemblies by raisestitching 1/16 inch from edge, the twill neckband-headpiece seam through the fleece assembly.	301 or 401	LSq-2(b) catching lining	10-14	III B or II B	III B I B
	d. Stitch, 1/16 to 1/8 inch from edge, the periphery of the two assemblies, simultaneously catching the free end of neck loop and the nose flaps where indicated by notches on the patterns. The neck loop shall finish with a free opening of 2 1/4 (+ 1/4) inches.	301 or 401	SSa-1	10-14	III B or II B	III B I B
*	e. Position the two 2-inch hook nylon fastener tapes with the hooks running vertically or the 4 5/8 inch hook tape with the hooks running horizontally on the twill side of the right front opening aligning them in the two corners 1/8 to 1/4 inch from the edges. Stitch 4 sides 1/16 to 1/8 inch from the edges.	301	LSa-1 each edge	10-14	III B or II B	III B I B
	f. Position the 4 5/8 inch pile nylon fastener tape section on the fleece side of the left front opening aligning the side and ends 1/8 to 1/4 inch from the edges. Stitch 4 sides 1/16 to 1/8 inch from the edges.	301	LSa-1 each edge	10-14	III B or II B	III B I B

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Table I - Construction of hoods (cont'd)

No.	Description of Operation	Stitch Type	Seam and Stitching Type	Stitches Per Inch	Thread	
					Needle	Bobbin or Looper
10.	Join twill and lining assemblies (cont'd) g. With the nose protective flaps recessed against the fleece lining, bind the periphery of the hood in one continuous operation, commencing and terminating the seam at the bottom edge of the neckband at neck loop with the ends of the binding overlapped 1 1/2 inches. OR h. The hook and pile fastener tapes may be positioned and attached during the binding operation prior to stitching the remaining unstitched sides.	301	BSc-1 or BSo-2	10-14	III B or II B	III B I B
11.	Attach visor a. Position visor on brow as indicated by marks on pattern. With ends of binding turned under, double stitch, 3/16 to 1/4 inch gauge. b. Stitch a 3/8 to 1/2 inch bartack at each end of the finished visor across the width of the binding parallel to the inner edge.	301	Similar to LSA-2 and LSB-2 at binding	10-14	III B or II B	III B I B
12.	Attach hood adjustment strap and buckle assembly a. Position and stitch the strap assembly to the center pieces as indicated by the marks on the patterns and as shown on Figures 1, 2 and 3, and as follows: b. The adjustment strap made of 5/8 inch webbing with buckle shall consist of a long strap (adjustment) and a short strap (loop).	Bartack		28 per bartack	III B or IIB	III B I B

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Table I - Construction of hoods (cont'd)

No.	Description of Operation	Stitch Type	Seam and Stitching Type	Stitches Per Inch	Thread	
					Needle	Bobbin or Looper
12.	Attach hood adjustment strap and buckle assembly (cont'd)					
	c. Fold an end of the longer piece of webbing $1\frac{1}{4}$ (+ $1/8$ ) inches with the raw end turned under $1/4$ to $3/8$ inch. Stitch the sides and folded ends to form a rectangle, $1/16$ inch from the edges. Thread unhemmed end of webbing through opening adjacent to lip end and fold back over bar through center opening in buckle.	301	OSf-1 SSa-1 and EFb-1	10-14	III B or II B	II B I B
	d. Turn under unhemmed end $1/4$ to $3/8$ inch. Attach to hood as indicated by pattern mark by stitching a $1/2$ to $5/8$ inch square with two diagonal lines of stitching crossing at the center. The square shall be stitched $1/16$ to $1/8$ inch from the edges.	301	Boxstitch	10-14	III B or II B	II B I B
	e. Turn under one end of the shorter piece of webbing $1/4$ to $3/8$ inch. Thread the unturned end through the opening adjacent to the bar end of the buckle and fold back to abut the turned end. Secure buckle with a single line of stitching, through webbing only, $3/8$ to $1/2$ inch from the buckle bar.	301	SSa-1	10-14	III B or II B	II B I B
	f. Attach to hood as indicated by pattern marks, by stitching a $1/2$ to $5/8$ inch square with two diagonal lines of stitching crossing at the center, over the abutted ends. The square shall be stitched, $1/16$ to $1/8$ inch from the edges.	301	Boxstitch	10-14	III B or II B	II B I B

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Table I - Construction of hoods (cont'd)

No.	Description of Operation	Stitch Type	Beam and Stitching Type	Stitches Per Inch	Thread	
					Needle	Bobbin or Looper
12.	<p>Attach hood adjustment strap and buckle assembly (cont'd)</p> <p>g. The finished strap lengths shall be as follows:</p> <p>-Short strap (Types I and II) - 1 5/8 (+ 1/8) inches (finished)</p> <p>-Long strap (Type I) 10 1/4 (+ 1/2) inches (finished)</p> <p>-Long strap (Type II) 9 1/4 (+ 1/2) inches (finished)</p> <p>Short strap shall be measured from folded edge to folded edge.</p> <p>Long strap shall be measured from hemmed end to hemmed end.</p>					
13.	<p>Clean hoods</p> <p>a. Trim all thread ends.</p> <p>b. Remove all loose threads.</p> <p>c. Remove all spots, stains and shade tickets.</p>					
14.	<p>Close and secure hoods</p> <p>Close front opening and fold nose protective flaps against the fleece lining.</p>					

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**3.8 Measurements** Measurements of the finished hoods shall be as shown in Table II (see Figures 1 and 2). All measurements are expressed in inches.

Table II - Measurements

Location	Dimension		Tolerance
	Type I	Type II	
(A) Neck Width	25	21 1/2	+ 1/2
(B) Face Circumference	22	20 1/2	+ 1/2
(C) Front Flaps	5 1/4	5 1/4	+ 1/4
(D) Overall Length	21 1/2	18 1/2	+ 1/2
(E) Nose Flaps	4 3/4	4 3/4	+ 1/4

NOTE: A, B, C, D, and E refer to Figures 1 and 2 with hoods laid and folded as indicated. The width of binding shall be included in all measurements where applicable.

- A. Neck Width - Measure along bottom circumference with hood folded in half. Double the value obtained.
- B. Face Circumference - Measure along face opening from front edge of flap to front edge of flap.
- C. Front Flaps - Measure from top to bottom edge at a distance of 1/2 inch from the front edges.
- D. Overall Length - Measure along centerline from front visor seam to bottom of back.
- E. Nose Flaps - Measure along centerline from inner edge of face circumference binding to outer end of flaps.

**\*3.9 Workmanship** The finished hoods shall conform to the quality established by this specification. The occurrence of defects shall not exceed the applicable acceptable point value or defect limit.

#### 4. QUALITY ASSURANCE PROVISIONS

**4.1 Responsibility for inspection** Unless otherwise specified in the contract or purchase order, the contractor is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract or order, the contractor may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to assure supplies and services conform to the prescribed requirements.

**4.1.1 Certificate of compliance** Where certificates of compliance are submitted, the Government reserves the right to check test such items to determine the validity of the certification.

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**4.2 Classification of inspection** The inspection requirements specified herein are classified as follows:

1. First article inspection (see 4.3).
2. Quality conformance inspection (see 4.4)

**4.3 First article inspection** When required, the first article submitted in accordance with 3.2 shall be inspected for compliance with design, construction, workmanship, appearance and dimensional requirements.

**\*4.4 Quality conformance inspection** Inspection shall be performed in accordance with MIL-STD-1667, except when otherwise indicated.

**4.4.1 Component and material inspection** In accordance with 4.1 above, components and materials shall be inspected and tested in accordance with the requirements of referenced specifications, drawings, and standards unless otherwise excluded, amended, modified, or qualified in this specification or applicable purchase document.

**\*4.4.2 End item examination** Sampling and examination of the end item shall be performed in accordance with the provisions of MIL-STD-1667.

**\*4.4.3 Packaging inspection** Packaging inspection shall be in accordance with MIL-STD-1667.

## 5. PACKAGING

**5.1 Preservation-packaging** Preservation packaging shall be level A or C as specified (see 6.2).

**5.1.1 Level A** Each hood shall be neatly folded to measure approximately 12 1/2 inches by 10 1/2 inches. Each folded hood shall be inserted into a snug-fitting clear polyethylene film bag of 0.00125 inch thickness (+ 20% tolerance). The bag shall be formed with heat sealed seams that are straight, continuous and parallel to each other and sealed with the seal made as close as possible to the open end. A 1/4 inch diameter hole shall be made at one corner of the polyethylene bag to allow excess air to escape. Alternatively, the polyethylene bag may be tuck-in or overlap type, in which a corner hole and heat seal closure are not required.

**5.1.2 Level C** Hoods shall be packaged to afford adequate protection against physical damage during shipment from the contractor to the first receiving activity. The package and the quantity per package shall be the same as that normally used by the contractor for retail distribution.

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

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5.2.1 Level A Thirty-six hoods of one type only, packaged as specified in 5.1, shall be packed in a fiberboard shipping container assembled, closed and reinforced conforming to class weather-resistant, grade V2s, size 3A of MIL-B-17757. The fiberboard for the liner shall conform to type CF, class weather-resistant, variety DW, grade V15c of MIL-B-17757. Level A packages shall be packed flat, front up, reversed end for end, two in length, one in width, and eighteen in depth within the shipping container. Each container shall have the contents completely covered on the top and bottom with a sheet of commercial grade kraft paper.

\*5.2.2 Level B Thirty-six hoods of one type only, packaged as specified in 5.1, shall be packed in a fiberboard shipping container assembled and closed, conforming to class domestic, grade 200, size 3A of MIL-B-17757. The fiberboard for the liner shall conform to type CF, class domestic, variety DW, grade 275 of MIL-B-17757. Level A packages shall be packed flat front up, reversed end for end, two in length, one in width, and eighteen in depth within the shipping container. Each container shall have the contents completely covered on the top and bottom with a sheet of commercial grade kraft paper.

5.2.2.1 When specified (see 6.2), the shipping container shall be a grade V3c, V3s or V4s fiberboard box fabricated in accordance with MIL-B-17757 and closed in accordance with the appendix of the box specification.

5.2.3 Level C Hoods, packaged as specified in 5.1, shall be packed in a manner to insure carrier acceptance and safe delivery at destination at the lowest transportation rate for such supplies. The quantity per shipping container shall be the same as that normally used by the contractor for retail distribution. Containers shall comply with the US Postal Service Manual, Uniform Freight Classification Rules or National Motor Freight Classification Rules, as applicable.

5.3 Marking In addition to any special marking required by the contract or order, interior packages and shipping containers shall be marked in accordance with MIL-STD-129.

5.3.1 Polyethylene bagged packages Polyethylene bagged packages shall have the required information legibly printed or stamped in black directly on the bag across the center face or on a white paper label inserted within the bag so as to permit ready identification. The bag or label shall indicate the following information:

STOCK NUMBER  
ITEM DESCRIPTION  
QUANTITY  
TYPE

## 6. NOTES

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**6.1 Intended use** These hoods are intended to be worn as part of the impermeable extreme cold weather outfit. The hoods provide waterproof barrier and thermal insulation properties to protect the wearer against cold and cold/wet conditions.

**6.2 Ordering data** Procurement documents should specify the following:

- a. Title, number and date of this specification.
- b. Type required (see 1.2).
- c. Selection of applicable levels of packaging and packing (see 5.1 and 5.2).
- d. When weather-resistant grade fiberboard shipping containers are required for level B packing (see 5.2.2.1).
- \*e. **First article** When a first article inspection is required, the item will be tested and should be a first article sample. The contracting officer should include specific instructions in acquisition documents regarding arrangements for examinations, quantity, and testing and approval of the first article.

**6.3 Samples and patterns** For access to samples and patterns, address the procuring activity issuing the invitation for bids.

**\*6.4 Recycled material** It is encouraged that recycled material be used when practical as long as it meets the requirements of this specification.

**\*6.5 Changes from previous issue** The margins of this specification are marked with an asterisk to indicate where changes (additions, modification, corrections, deletions) from the previous issue were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the last previous issue.

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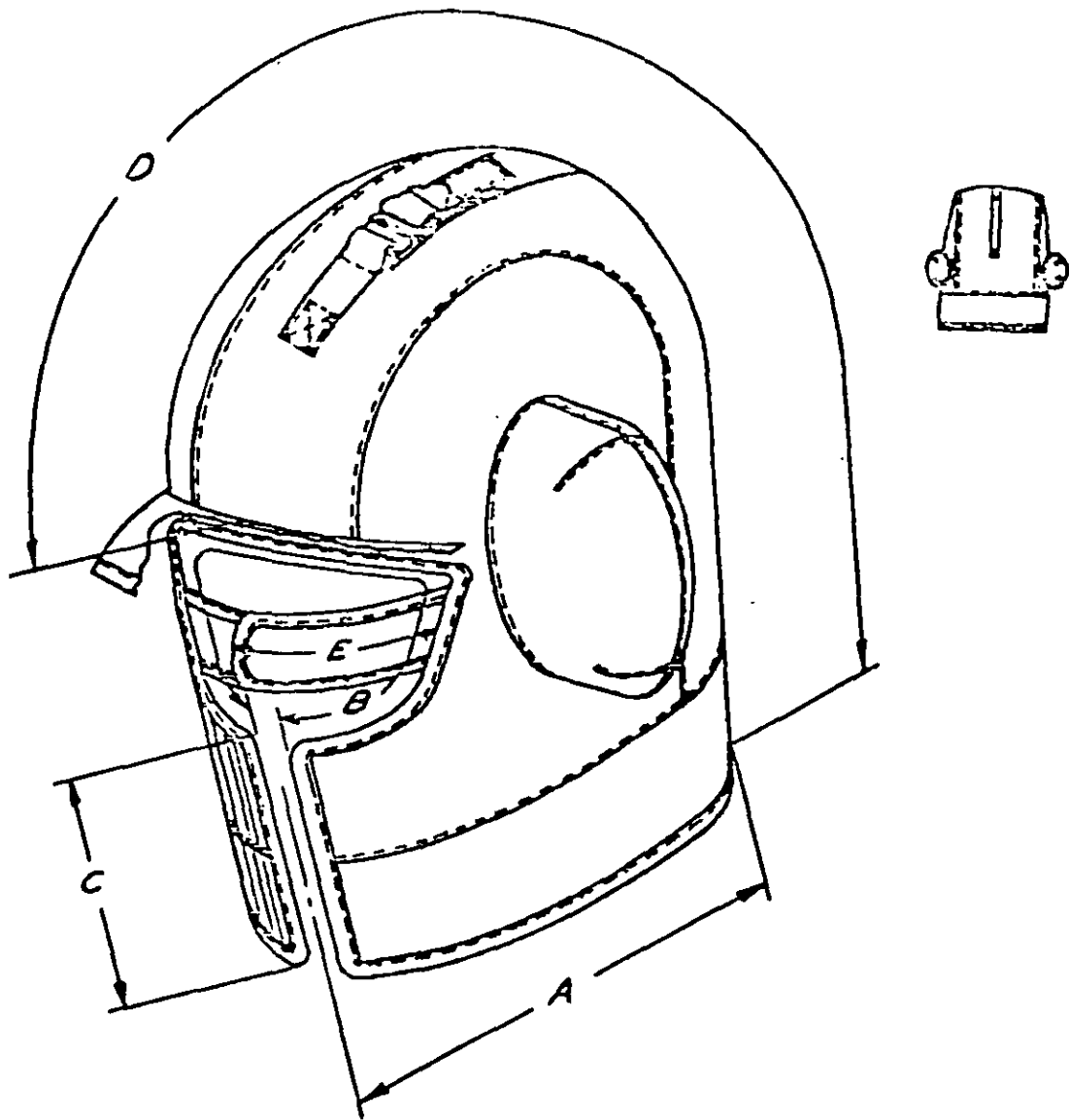


FIGURE 1 HOOD, EXTREME COLD  
WEATHER, IMPERMEABLE  
(TYPE I)

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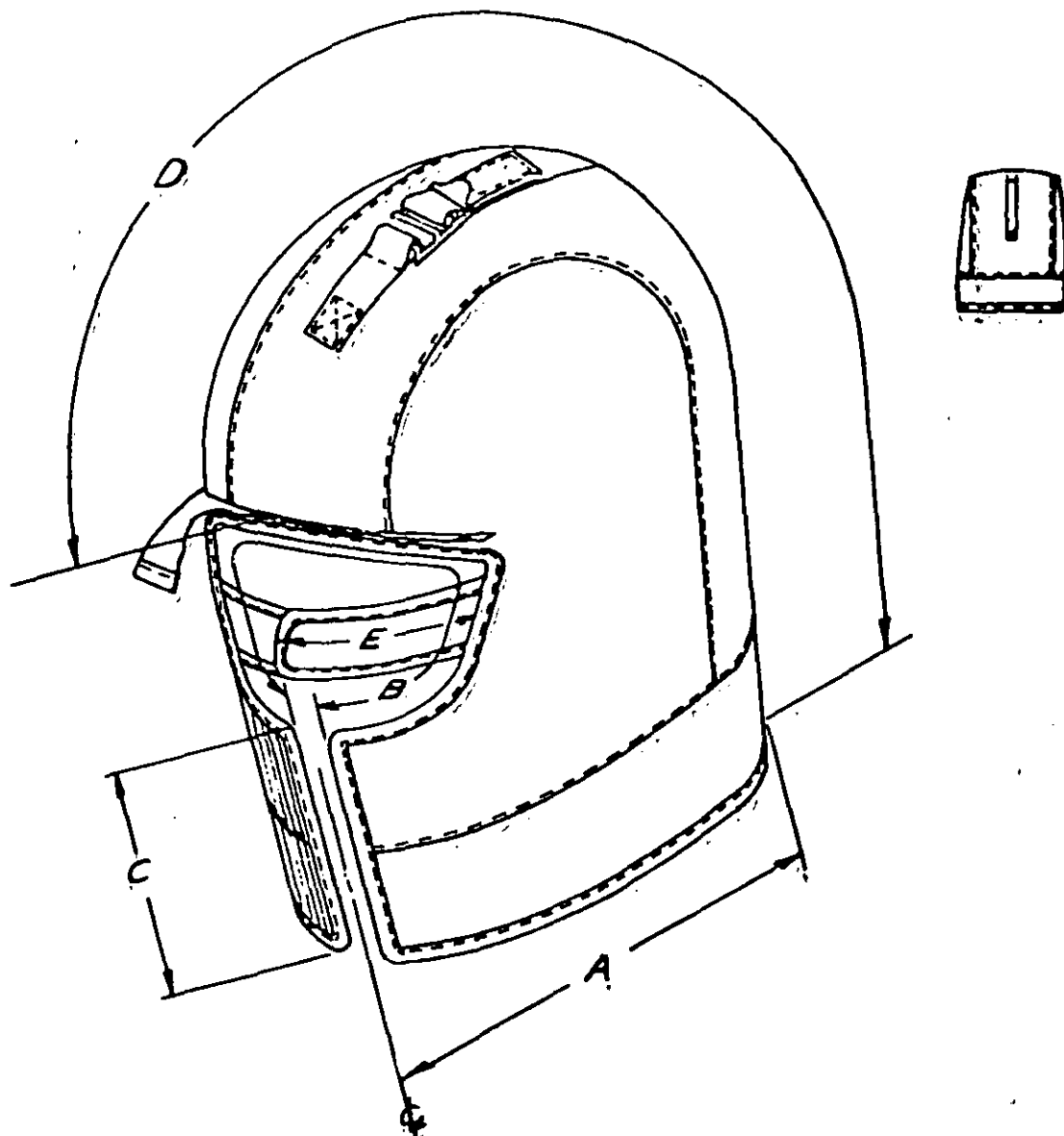
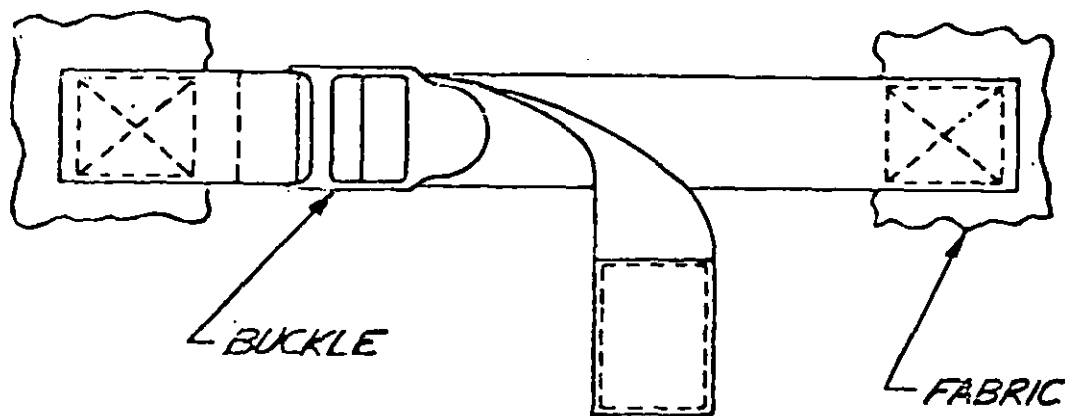
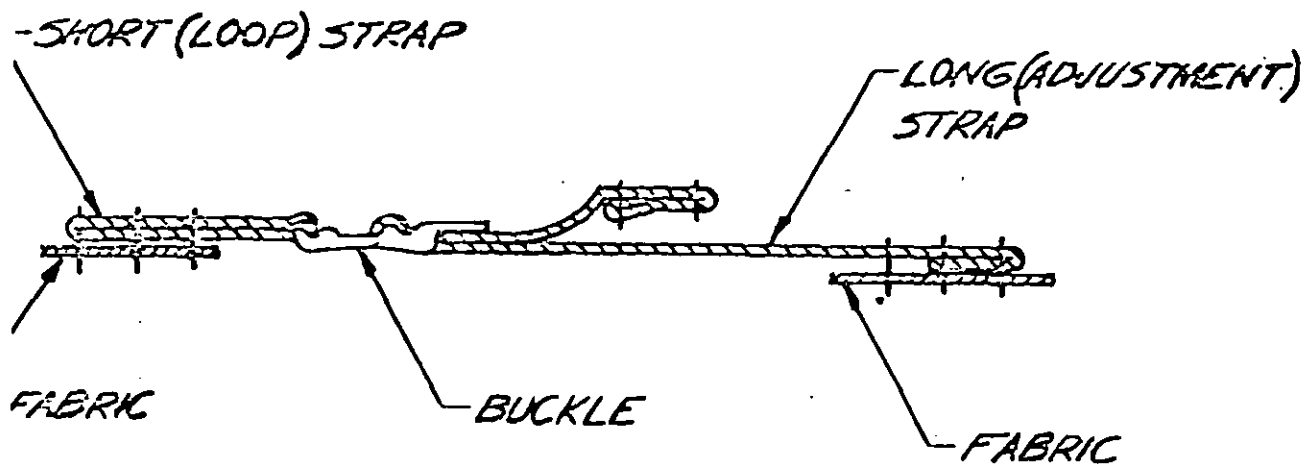


FIGURE 2 HOOD, EXTREME COLD  
WEATHER, IMPERMEABLE  
(TYPE II)

WTL-N-292 01 B



TOP VIEW



SIDE VIEW

FIGURE 3-ADJUSTMENT STRAP  
AND BUCKLE ASSEMBLY

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**FIGURE 3-ADJUSTMENT STRAP  
AND BUCKLE ASSEMBLY**



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