

MIL-H-41802E
3 October 1986
SUPERSEDING
MIL-H-41802D
31 March 1976

MILITARY SPECIFICATION

HEADBAND AND NECKBAND, GROUND TROOPS'-PARACHUTISTS' HELMET LINER

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

1. SCOPE

1.1 Scope. This document covers a headband and a neckband for the ground troops'-parachutists' helmet liner.

1.2 Classification. The bands shall be of the following types as specified (see 6.2):

Type I - Headband for Ground Troops'-Parachutists' Helmet Liner

Type II - Neckband for Ground Troops'-Parachutists' Helmet Liner

2. APPLICABLE DOCUMENTS

2.1 Government documents.

- * 2.1.1 Documents. The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents shall be those listed in the issue of the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation.

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to U.S. Army Natick Research, Development, and Engineering Center, Natick, MA 01760-5014, by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC N/A

FSC 8470

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

SPECIFICATIONS

FEDERAL

- | | |
|-----------|--|
| V-T-285 | - Thread, Polyester |
| DDD-L-20 | - Label; For Clothing, Equipage, and Tentage, (General Use) |
| PPP-B-636 | - Boxes, Shipping, Fiberboard |
| PPP-T-45 | - Tape, Gummed Paper, Reinforced and Plain, for Sealing and Securing |

MILITARY

- | | |
|-------------|--|
| MIL-W-530 | - Webbing, Textile, Cotton, General Purpose, Natural or in Colors |
| MIL-L-35078 | - Loads, Unit: Preparation of Semiperishable Subsistence Items; Clothing, Personal Equipment and Equipage; General Specification For |
| MIL-L-40074 | - Leather, Calfskin, for Headbands |
| MIL-H-43178 | - Hardware; for Helmets, Helmet Liners and Bands |
| MIL-T-43566 | - Tape, Textile, Cotton, General Purpose, Natural or in Colors |

STANDARDS

FEDERAL

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

MILITARY

- | | |
|-------------|---|
| MIL-STD-105 | - Sampling Procedures and Tables for Inspection by Attributes |
| MIL-STD-129 | - Marking for Shipment and Storage |
| MIL-STD-147 | - Palletized Unit Loads |
| MIL-STD-731 | - Quality of Wood Members for Containers and Pallets |

DRAWINGS

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

- | | |
|---------|---|
| 2-1-192 | - Headband, Ground Troops'-Parachutists' Helmet Liner; Assembly, Details and Sections |
|---------|---|

2-1-484

- Neckband, Ground Troops'-Parachutists' Helmet
Liner; Assembly

(Copies of documents required by contractors in connection with specific acquisition functions should be obtained from the contracting activity or as directed by the contracting activity.)

- * **2.2 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 documents not listed in the DODISS shall be the issues of the nongovernment documents which are current on the date of the solicitation.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

D 3951 - Standard Practice for Commercial Packaging

(Application for copies should be addressed to the American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.)

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

- * **2.3 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 shall take precedence. Nothing in this document, however, shall supersede applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

3.1 First article. When specified in the contract or purchase order, a sample shall be subjected to first article inspection (see 4.3, 6.2, and 6.3).

3.2 Materials. (See 6.5.)

3.2.1 Tape, textile, cotton. The tape for the headband shall conform to type I, class 3, 1 1/8 inches wide, color Olive Drab 7 of MIL-T-43566.

3.2.2 Webbing, textile, cotton. The webbing for the neckband shall conform to type IIa, class 3, 1/2 inch and 1 1/2 inches wide, color Olive Drab 7 of MIL-W-530.

3.2.3 Thread, polyester. The thread for all stitching shall be polyester, conforming to type I or II, class 1, sub-class A, size E of V-T-285. The thread shall be dyed Olive Drab S-1, C.A. 66022, and shall show fastness to perspiration and light equal to or better than the standard sample (see 6.4).

3.2.4 Leather. The leather for the headband shall conform to MIL-L-40074.

3.2.5 Buckle, bar. The buckle for the headband shall conform to type I of MIL-H-43178.

3.3 Construction. The construction of the headband and neckband shall conform to that specified on Drawings 2-1-192 and 2-1-484.

3.3.1 Stitching. All stitches, except bartacking, shall conform to type 301 of FED-STD-751, with 8 to 10 stitches to the inch.

3.3.1.1 Type 301 stitching. Ends of stitching shall be backstitched or overstitched 1/2 inch minimum except when caught in other stitching. Thread tension shall be maintained so that there will be no loose stitching resulting in loose bobbin or top thread, or excessively tight stitching resulting in puckering of the sewn materials. The lock shall be embedded in the sewn materials.

3.3.1.1.1 Repairs of type 301 stitches. Repairs of type 301 stitching shall be as follows:

a. When thread breaks or bobbin run-outs occur during sewing, the stitching shall be repaired by restarting the stitching a minimum of 1/2 inch back of the end of the stitching. ^{1/}

b. Thread breaks, two or more consecutive skipped or run-off stitches noted during inspection of the item (in-process or end item) shall be repaired by overstitching. The stitching shall start a minimum of 1/2 inch in back of the defective area, continue over the defective area and continue a minimum of 1/2 inch beyond the defective area onto the existing stitching. Loose or excessively tight stitching shall be repaired by removing the defective stitching, without damaging the materials, and restitching in the required manner. ^{1/}

^{1/} When making the above repairs, the ends of the stitching are not required to be backstitched.

3.3.1.2 Bartacks. Bartacks on the headband and neckband shall be the length specified on the applicable drawings and as follows:

<u>Length (inches)</u>	<u>Width (inches)</u>	<u>Number of stitches</u>
1/2 ± 1/16	1/8 ± 1/32	28
7/8 ± 1/16	1/8 ± 1/32	42

Bartacks shall be free of thread breaks, skipped stitches, and loose stitching.

3.3.1.3 Automatic stitching. Automatic machines may be used to perform any of the required stitch patterns provided the requirements for the stitch pattern, stitches per inch, and size and type of thread are met. At least three tying, overlapping, or back stitches shall be used to secure the ends of the stitching.

3.3.1.4 Thread ends. All thread ends shall be trimmed to a length of not more than 1/4 inch.

* **3.3.2 Finishing of webbing and tape ends.** The ends of the webbing and tape, wherever indicated on the drawings, shall be pinked.

* **3.3.3 Marking.** The identification marking shall be applied in the location shown on Drawing 2-1-192. The marking shall conform to type IV, class 5 of DDD-L-20 and the applicable item description shall be as follows:

Headband, Helmet Liner
Neckband, Helmet Liner

3.4 Repairs. Except as otherwise specified herein, repairs are not allowed to be made to the headband or neckband.

3.5 Replacement of defective components. During the spreading, cutting, and manufacturing process, components having material defects or damages that are classified as defects in 4.4.3 shall be removed from production and replaced with nondefective components.

3.6 Workmanship. The finished bands shall conform to the quality of product established by this document and the occurrence of defects shall not exceed the applicable acceptable quality levels.

4. QUALITY ASSURANCE PROVISIONS

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

* **4.1.1 Responsibility for compliance.** All items must meet all requirements of sections 3 and 5. The inspection set forth in this document shall become a part of the contractor's overall inspection system or quality program. The absence of any inspection requirement in the document shall not relieve the contractor of the responsibility of assuring that all products or supplies submitted to the Government for acceptance comply with all requirements of the contract. Sampling in quality conformance does not authorize submission of known defective material, either indicated or actual, nor does it commit the Government to acceptance of defective material.

* **4.1.2 Responsibility for dimensional requirements.** Unless otherwise specified in the contract or purchase order, the contractor is responsible for assuring that all specified dimensions have been met. When dimensions cannot be examined on the end item, inspection shall be made at any point or at all points in the manufacturing process necessary to assure compliance with all dimensional requirements.

4.1.3 Certificates of compliance. When certificates of compliance are submitted, the Government reserves the right to inspect such items to determine the validity of the certification.

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

- a. First article inspection (see 4.3).
- b. Quality conformance inspection (see 4.4).

4.3 First article inspection. When a first article is required (see 6.2), it shall be examined for the defects specified in 4.4.3 and 4.4.4. The presence of any defect shall be cause for rejection of the first article.

4.4 Quality conformance inspection. Unless otherwise specified, sampling for inspection shall be performed in accordance with MIL-STD-105.

4.4.1 Component and material inspection. In accordance with 4.1, components and materials shall be inspected in accordance with all the requirements of referenced documents unless otherwise excluded, amended, modified, or qualified in this document or applicable purchase document.

4.4.1.1 Certification. The contractor shall furnish a certificate of compliance certifying that the leather has been finished as specified in 3.2.4.

4.4.2 In-process inspection.

4.4.2.1 In-process visual examination of headbands and neckbands. Examination shall be made at any point or during any phase of the manufacturing operation to determine whether construction details that cannot be examined in the finished product are in accordance with the specified requirements of Drawings 2-1-192 and 2-1-484. Included shall be a dimensional examination of the leather band components of the headband prior to stitching. Whenever nonconformance is noted, corrections shall be made to the items affected and lot in process. Parts that cannot be corrected shall be removed from production.

* **4.4.2.2 Dimensional examination of headband sub-assembly.** The headband shall be dimensionally examined prior to performing the final assembly operation as specified on Drawing 2-1-192. The lot size shall be expressed in units of headbands. The sample unit shall be one headband sub-assembly. Examination shall be made for compliance with all dimensions shown on the drawing applicable to the headband sub-assembly including stitch margins, size of leather before being sewn, and distances, locations, and depth of click outs. The depth dimension shall be $\pm 3/8$ inch. The overall length before bartacking shall be 27 inches $\pm 1/4$ inch. Any dimension exceeding the applicable tolerance shall constitute a defect. The inspection level shall be S-3 and the acceptable quality level (AQL), expressed in terms of defects per hundred units, shall be 4.0.

4.4.3 End item visual examination. The end item shall be examined for the defects listed in table I. The lot size shall be expressed in units of headbands or neckbands, as applicable. The sample unit shall be one completely fabricated headband or neckband, as applicable. The inspection level for headbands shall be II and the AQL, expressed in terms of defects per hundred units, shall be 2.5 for major defects and 15.0 for total (major and minor combined) defects. For neckbands, the inspection level shall be II and the AQL, expressed in terms of defects per hundred units, shall be 1.5 for major defects and 10.0 for total (major and minor combined) defects. Unless otherwise specified, defects are to be scored individually.

TABLE I. End item visual defects

Examine	Defect	Classification	
		<u>Major</u>	<u>Minor</u>
Tape and webbing	Any hole, cut, tear, or frayed edge	X	
	Not firmly or tightly woven; edges scalloped		X
	Ends not pinked		X
Leather (headband)	Cut, hole, or tear	X	
	Finish chipped, flaky, cracked, or omitted	X	
	Any imperfection that would cause discomfort to wearer such as hard area, scar tissue, or lumps	X	
	Grain surface of leather not facing outside	X	
	Deep scratch, crack, heavy vein, pit, or abraded area		X
Hardware (headband)	Broken or malformed, failing to serve intended purpose; finish omitted, corroded area; burr or sharp edge	X	
	Buckle not attached in orientation specified	X	
	Style A clips (with teeth) or style D clips (without teeth) not attached in specified positions		X
Seams and stitching			
Open seams	More than 1/2 inch	X	
	One-half inch or less		X

NOTE: A seam shall be classified as open when one or more stitches joining a seam are broken or when two or more consecutive skipped run-off stitches occur.

TABLE I. End item visual defects - Continued

Examine	Defect	Classification	
		<u>Major</u>	<u>Minor</u>
Seams and stitching - continued			
Run-offs (see open seams)			
Seam and stitch type	Wrong seam or stitch type	X	
Stitch tension	Loose, resulting in loose bobbin or top thread		X
	Excessively tight, resulting in puckering of material or cutting of leather between needle holes		X
Stitches per inch (except on bartacks)	Two or more stitches less than minimum specified	X	
	One stitch less than minimum specified		X
	One or more stitches in excess of maximum specified		X
Stitching ends	Ends of stitching not secured as specified (except when caught in other stitching)		X
Thread breaks, skipped or run-off stitches (on type 301 stitching)	Overstitched less than 1/2 inch in each direction beyond the defective stitching area		X

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.

TABLE I. End item visual defects - Continued

Examine	Defect	Classification	
		<u>Major</u>	<u>Minor</u>
Seams and stitching - continued			
Rows of stitching	Any row omitted, except on double "W" or box-X stitch pattern	X	
	On double "W" or box-X stitch pattern:		
	-two or more rows omitted	X	
	-one row omitted		X
Bartacks	Any omitted	X	
	Stitching loose, skipped, or broken		X
Components and assembly	Any required component or operation omitted (unless otherwise classified herein)	X	
	Any component misplaced or not assembled as specified (unless otherwise classified herein)	X	
	Color of any component not as specified		X
	Needle chews	X	
	Any unauthorized repair	X	
Marking	Omitted, illegible, or incorrect		X
Cleanness	Spots or stains clearly noticeable		X
	Thread ends not trimmed throughout as specified		X

4.4.4 End item dimensional examination of neckband. The end item shall be examined for compliance with all dimensions shown on the Drawing 2-1-484, including stitch margins. Any dimension exceeding the applicable tolerance shall constitute a defect. The lot size shall be expressed in terms of neckbands. The sample unit shall be one complete neckband. The inspection level shall be S-3 and the AQL, expressed in terms of defects per hundred units, shall be 4.0.

4.4.5 Packaging examination. The fully packaged end items 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.

<u>Examine</u>	<u>Defect</u>
Marking (exterior and interior)	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 sealing or closure of flap, improper taping, loose strapping, or inadequate stapling Bulged or distorted container
Content	Number of bands per bundle is more or less than specified ^{1/} Number of bundles per intermediate container is more or less than required

^{1/} For this defect, one bundle from each shipping container in the sample shall be examined.

4.4.6 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.

<u>Examine</u>	<u>Defect</u>
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 as specified

<u>Examine</u>	<u>Defect</u>
Weight	Exceeds maximum load limits
Marking	Omitted; incorrect; illegible; of improper size, location, sequence, or method of application

5. PACKAGING

5.1 Preservation. Preservation shall be level A or Commercial, as specified (see 6.2).

5.1.1 Level A.

5.1.1.1 Headband (type I). Each assembled headband shall be adjusted to its smallest size (approximately 10 inches in length) and folded with the leather band on the outside in such a manner that the metal components (clips and buckle) are not in contact. Ten folded headbands shall be neatly stacked, alternated end for end, and secured at each end with cotton tape or twine to form a bundle. Twenty bundles shall be packed on edge four in length, one in width, and five in depth within an intermediate container as specified in 5.1.1.3.

5.1.1.2 Neckband (type II). Ten neckbands shall be laid flat and neatly stacked. The extended adjusting tapes shall then be folded back over the neckband body, and the resultant bundle secured at each end with cotton tape or twine. Sixty bundles shall be packed flat ten in length, two in width, and three in depth within an intermediate container as specified in 5.1.1.3.

5.1.1.3 Intermediate container. The intermediate container shall conform to style RSC, type CF (variety SW), class domestic, grade 200 of PPP-B-636. Approximate inside dimensions of each intermediate box shall be as specified in table II. Box closure shall be effected with 2-inch minimum width gummed paper tape conforming to type III, grade B of PPP-T-45.

TABLE II. Approximate inside dimensions of containers ^{1/}

Type of band	Intermediate container (inches)	Shipping container (inches)
Headband (type I)	14 by 10 by 6 3/4	23 by 14 3/4 by 10 1/2
Neckband (type II)	16 1/4 by 11 1/2 by 6 1/2	20 1/2 by 17 by 12

^{1/} Approximate inside dimensions are furnished as a guide only.

- * 5.1.2 Commercial. The headbands and neckbands shall be preserved in accordance with ASTM D 3951.

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

- * 5.2.1 Level A packing. Six hundred type I headbands or eighteen hundred type II neckbands, preserved as specified in 5.1, shall be packed in a fiberboard shipping container conforming to style RSC, grade V2s of PPP-B-636. Level A intermediate containers of type I headbands or type II neckbands (three in length) shall be packed on their sides within a shipping container. Approximate inside dimensions of each shipping container shall be as specified in table II. Each shipping container shall be closed in accordance with method III, waterproofed in accordance with method V, and reinforced as specified in the appendix of PPP-B-636 except that the inspection shall be as specified in 4.4.5. Shipping containers shall be arranged in unit loads in accordance with MIL-L-35078 for the type and class of load specified (see 6.2). Strapping shall be limited to nonmetallic strapping, except for type II, class F loads.
- * 5.2.2 Level B packing. Six hundred type I headbands or eighteen hundred type II neckbands, preserved as specified in 5.1, shall be packed in a fiberboard shipping container conforming to style RSC, type CF (variety SW) or SF, class domestic, grade 275 of PPP-B-636. Level A intermediate containers of type I headbands or type II neckbands (three in length) shall be packed on their sides within a shipping container. Approximate inside dimensions of each shipping container shall be as specified in table II. Each

shipping container shall be closed in accordance with method II as specified in the appendix of PPP-B-636, except that the inspection shall be as specified in 4.4.5.

5.2.2.1 Weather-resistant shipping container. When specified (see 6.2), the shipping container shall be a grade V3c, V3s, or V4s fiberboard box fabricated in accordance with PPP-B-636 and closed in accordance with method III as specified in the appendix of PPP-B-636, except that the inspection shall be as specified in 4.4.5.

5.2.3 Commercial packing. Headbands and neckbands, preserved as specified in 5.1, shall be packed in accordance with ASTM D 3951.

5.3 Palletization. When specified (see 6.2), bands of one type only, packed as specified in 5.2.2 and 5.2.3, shall be palletized on a 4-way entry pallet in accordance with load type Ia of MIL-STD-147. Pallet type shall be type I (4-way entry), type IV, or type V in accordance with MIL-STD-147. Pallets shall be fabricated from wood groups I, II, III, or IV of MIL-STD-731. Each prepared load shall be bonded with primary and secondary straps in accordance with bonding means K and L or film bonding means O or P. Pallet pattern shall be number 3 for type I and number 95 for type II in accordance with appendix of MIL-STD-147. Interlocking of loads shall be effected by reversing the pattern of each course.

5.4 Marking. In addition to any special marking required by the contract or purchase order, intermediate containers, shipping containers, and palletized unit loads shall be marked in accordance with MIL-STD-129 or ASTM D 3951, as applicable.

6. NOTES

6.1 Intended use. The bands are used with the Ground Troops'-Parachutists' Helmet Liner (MIL-L-41800).

6.2 Ordering data. Acquisition documents should specify the following:

- a. Title, number, and date of this document.
- b. Type of band required (see 1.2).
- c. When a first article is required (see 3.1, 4.3, and 6.3).
- d. Selection of applicable levels of preservation and packing (see 5.1 and 5.2).
- e. Type and class of unit load required (see 5.2.1).
- f. When weather-resistant shipping containers are required for level B packing (see 5.2.2.1).
- g. When palletization is required (see 5.3).

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

6.4 Standard sample. For access to samples for shade, address the contracting activity issuing the invitation for bids.

6.5 Recycled material. It is encouraged that recycled material be used when practical as long as it meets the requirements of this document (see 3.2).

- * 6.6 Subject term (key word) listing.

Headband, ground troops' parachutists' helmet liner
Neckband, ground troops' parachutists' helmet liner

6.7 Changes from previous issue. The margins of this document are marked with an asterisk (*) to indicate where changes (additions, modifications, 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, as written, irrespective of the marginal notations and relationship to the last previous issue.

Custodians:

Army - GL
Navy - NU
Air Force - 99

Preparing activity:

Army - GL
Project No. 8470-0111

Review activities:

Army - MD
Air Force - 82
DLA - CT

User activity:

Navy - MC

STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

(See Instructions - Reverse Side)

1. DOCUMENT NUMBER

MIL-H-41802E

2. DOCUMENT TITLE

Headband and Neckband, Ground Troop's-Parachutists' Helmet Liner

3a. NAME OF SUBMITTING ORGANIZATION

4. TYPE OF ORGANIZATION (Mark one)

☐

VENDOR

☐

USER

☐

MANUFACTURER

☐

OTHER (Specify): _____

4. ADDRESS (Street, City, State, ZIP Code)

5. PROBLEM AREAS

a. Paragraph Number and Wording:

b. Recommended Wording:

c. Reason/Rationale for Recommendation:

6. REMARKS

7a. NAME OF SUBMITTER (Last, First, MI) - Optional

8. WORK TELEPHONE NUMBER (Include Area Code) - Optional

c. MAILING ADDRESS (Street, City, State, ZIP Code) - Optional

9. DATE OF SUBMISSION (YYMMDD)

DD FORM 1426
82 MAR

PREVIOUS EDITION IS OBSOLETE.

NATICK (X), 1 Apr 84

Source: <http://assist.dla.mil> -- Downloaded: 2019-02-07T09:53Z
Check the source to verify that this is the current version before use.