

MIL-F-87023B(NU)
13 April 1984
 SUPERSEDING
 MIL-F-87023A(NU)
 13 November 1979

MILITARY SPECIFICATION

FOOTWEAR COVERS, DISPOSABLE

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 a disposable protective footwear cover fabricated from flexible vinyl plastic film (see 6.1).

* 1.2 Classification. The footwear covers covered by this specification shall be one type in the following sizes:

<u>Size</u>	<u>Related Shoe Size</u>
Small	Up to and including size 6
Medium	Size 6-1/2 up to and including size 8
Large	Size 8-1/2 up to and including size 10
Extra Large	Size 10-1/2 up to and including size 13

2. APPLICABLE DOCUMENTS

2.1 Government documents.

* 2.1.1 Specifications and standards. Unless otherwise specified, the following specifications and standards 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.

Beneficial comments (recommendations, additions, 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 Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

FSC 8430

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SPECIFICATIONS

FEDERAL

- | | |
|-----------|--|
| V-T-276 | - Thread, Cotton |
| L-P-375 | - Plastic Film, Flexible, Vinyl Chloride |
| PPP-B-636 | - Box, Shipping, Fiberboard |

MILITARY

- | | |
|-------------|-------------------------------------|
| MIL-T-43548 | - Thread, Polyester, Cotton-covered |
| MIL-T-43624 | - Thread, Polyester, Spun |

STANDARDS

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 |

(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.)

2.1.2 Other Government documents, drawings, and publications. The following other Government documents, drawings, and publications form a part of this specification to the extent specified herein.

LAWS AND REGULATIONS

U.S. POSTAL SERVICE MANUAL

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

* 2.1.3 Order of precedence. In the event of a conflict between the text of this specification and the references cited herein, the text of this specification shall take precedence.

2.2 Other publications. The following document(s) 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.

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NATIONAL MOTOR FREIGHT TRAFFIC ASSOCIATION, INC., AGENT

National Motor Freight Classification

(Applications for copies should be addressed to the American Trucking Association, ATTN: Traffic Department, 1616 P Street, N.W., Washington, DC 20036.)

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, Illinois • 60606.)

3. REQUIREMENTS

3.1 Guide sample. 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. When specified, the contractor shall furnish sample unit(s) for first article inspection and approval (see 4.3, 6.2, and 6.5).

3.3 Material.

3.3.1 Plastic film, flexible vinyl.

3.3.1.1 Uppers. The vinyl film used for the uppers of the cover shall be 0.008 (+ 0.0008) inch thick and shall conform to Type I, Class 1 of L-P-375.

3.3.1.2 Outsoles. The vinyl film used for the outsoles of the cover shall conform to Type I, Class 1 of L-P-375, except that the thickness shall be 0.040 (+ 0.004) inch. The requirements for the 0.040 inch film shall be limited to the following: material, bondability, finish, pin holes per square yard, blocking, weatherometer, and dimensional stability as specified in L-P-375 for the 0.020 inch thick film. The walking surface of the outsole shall be embossed with a non-skid pattern.

3.3.2 Elastic tape. The material used for the top closure shall be either a woven or braided tape (see 6.4), 5/8 (+ 1/16) inch wide, white or natural in color. A certificate of compliance will be accepted for these requirements.

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3.3.3 Thread. When used, the thread for seaming elastic tape to top edge of foot covers may be cotton 100%, cotton/polyester, or polyester 100%, conforming to V-T-276, MIL-T-43548, OR MIL-T-43624. The size of the thread shall be of proper size to accommodate the needle, looper, and material being sewn and in accordance with good commercial practices. The color of the thread shall be white.

3.4 Design. Footwear covers shall be a pull-on, disposable type of a single shape (for either foot) with an elastic top closure. Seams shall be heat-sealed and the outsole shall have a non-skid pattern.

3.5 Patterns. Guide patterns for upper and outsole will be furnished by the Government for use by the contractor in preparing his working dies. Minor modifications are permitted providing the dimensions of the finished cover conform to the measurements in 3.7 (see operation 4).

3.5.1 Dies. The contractor shall furnish all dies necessary to cut and heat seal in the manufacturing of footwear covers.

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

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TABLE I - CONSTRUCTION OF FOOTWEAR COVER

No.	Operation	Stch Type	Seam/ Stch type	Stch in	Thread Ndl Bob/ Lpr
1.	<u>Cutting.</u>				
	Cut component parts in accordance with patterns. The embossed side of the vinyl film used for sole shall finish on the outside of the footwear cover.				
2.	<u>Replacement of damaged components.</u>				
	Replace any defective components at the time of cutting and before manufacturing.				
3.	<u>Prepare elastic top band.</u>				
	a. Cut elastic band to size.				
	b. Overlap ends of tape approximately 1/4 inch and stitch securely with any stitch type to prevent separation.				
4.	<u>Fuse upper.</u>				
	Fold the upper in half and fuse. The width of the fuse zone shall be 1/8 (+ 1/16) inch. The seam may finish on either side of the footwear cover. As an alternate, two layers of upper material may be fused together simultaneously, providing a heat sealed seam at center front and center back of the covers. Finish dimensions and configurations shall conform to government patterns.				
5.	<u>Insert elastic band.</u>				
	Turn top edge of upper approximately 1-1/8 to 1-1/4 inches. Insert proper size elastic band (see operation 3) and fuse the entire circumference. The width of the fuse zone shall be 1/8 (+ 1/16) inch. The seam may finish on either side of the foot cover.				

OR AS AN ALTERNATE

Bind top edge of upper with an elastic band (see 3.3.2).

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TABLE I - CONSTRUCTION OF FOOTWEAR COVER

No.	Operation	Stch Type	Seam/ Stch type	Stch in	Thread Ndl Bob/ Lpr
6.	<u>Fuse soles to upper.</u> Position soles to upper and fuse. The width of the fuse zone shall be 1/8 (+ 1/16) inch. The seam shall finish on the outside of the cover.				
7.	<u>Cleaning.</u> Remove all spots, stains, and trim all excess vinyl material.				
8.	<u>Electronic fusion of seams.</u> All seams shall be electronically fused. Seams shall not be easily pulled apart with moderate hand pressure.				
9.	<u>Permanent size label.</u> Each cover shall contain a permanent size label. It may be embossed or permanent ink, on any part of the cover or be an auxiliary label fused into the front or top edge seam and shall list the contractors name.				

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3.7 Measurements. The finished dimensions of the footwear covers shall be as follows and as indicated in Figure 1. All measurements are in inches.

	<u>Small</u>	<u>Medium</u>	<u>Large</u>	<u>Extra Large</u>	<u>Tolerance</u>
"A" Top Relaxed (Flat)	6	6	6	6	+ 3/8
"B" Top Stretched (Flat)(min)	7	8	9	10	--
"C" Height (min)	11	11	11	11	--
"D" Sole Length <u>1/</u>	11-1/4	12-1/4	13-1/8	14	+ 3/8
Sole Width (Widest Part)	4-3/4	5-1/4	5-7/8	6-5/8	+ 3/8
"E" Height Toe (min) <u>2/</u>	4	4	4	4	--

1/ Inclusive of sealed seam.

2/ Measurement shall be the actual surface (flat) distance taken from sole edge to upper seam.

3.8 Workmanship. The finished footwear covers shall conform to the quality established by this specification. 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, 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 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 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.

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. The first article submitted in accordance with 3.2 and 6.5 shall be inspected as specified in 4.4.2 for compliance with design, construction, workmanship, and dimensional requirements.

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4.4 Quality conformance inspection. Sampling for inspection shall be performed in accordance with MIL-STD-105, except where otherwise indicated.

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

4.4.2 Examination of the end item. Examination of the end item shall be in accordance with 4.4.2.1 through 4.4.2.2. The applicable inspection levels and acceptable quality levels (AQL's) shall be as indicated in 4.4.2.3. The sample unit shall be one cover and the selection shall be by pairs. For the pairing examination, the pair shall be examined together. Each defect found during the examination for pairing shall be scored as a single defect.

4.4.2.1 Visual examination. The covers shall be examined for defects in accordance with the list below:

Examine	Defects
Material Defects and Workmanship	<ul style="list-style-type: none"> a. Not material specified. b. Any rough edge. c. Excess material not trimmed from heat seal. d. Any hole (including pinhole), cut, tear, blister, or bubble. e. Crack, crater, crazing, rupture, wrinkles, or burn. f. Any thin or weak spot. g. Outsole walking surface not embossed with non-skid pattern. h. Width of heat sealed seams not within specified tolerance. i. Outsole seam not on outside of cover. j. Any open seam. k. Inadequate heat seal, i.e., seam can be easily pulled apart with moderate hand pressure. l. Any spot or stain on outside. m. Permanent size label omitted.
Pairing	Not properly matched, i.e., not same size for each cover of pair.
Cutting	Any part not cut in accordance with the general configuration of the government furnished guide pattern.

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4.4.2.2 Dimensional examination. The covers shall be examined for dimensional defects. Any measurement deviating from the dimensions and tolerances specified in 3.7 shall be scored as a defect.

4.4.2.3 Inspection levels and acceptable quality levels. The inspection levels and acceptable quality levels (AQL's), expressed as defects per 100 units, for the visual examinations shall be as follows:

	<u>Inspection level</u>	<u>AQL</u>
For defects applicable to 4.4.2.1	II	4.0
For defects applicable to 4.4.2.2	S-3	4.0

4.4.2.4 Examination of packaging requirements. An examination shall be made to determine that packaging, packing, and marking comply with section 5 requirements of this specification. Defects shall be scored in accordance with the list below. The sample unit shall be one shipping container fully prepared for delivery except that it need not be sealed. Defects of closure listed below shall be examined on shipping containers fully prepared for delivery. The lot size shall be the number of shipping containers in the end item inspection lot. The inspection level shall be S-2 and the AQL shall be 2.5 defects per 100 units.

<u>Examine</u>	<u>Defects</u>
Marking (exterior and interior)	Omitted, incorrect, illegible, or 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 closures of container flaps, improper taping, loose strapping, or inadequate stapling, bulging, or distortion of container.
Content	a. Number of packages per container is more or less than specified. b. Number of covers per package is more or less than specified. <u>1/</u>

1/ For this defect, two packages from each container in the sample shall be examined.

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4.4.2.5 Palletization examination. An examination shall be made to determine that the palletization complies with the section 5 requirements. Defects shall be scored in accordance with the list below. The sample unit shall be one palletized unit load fully packaged. The lot size shall be the number of palletized unit loads in the end item inspection lot. The inspection level shall be S-1 and the AQL, expressed in terms of defects per hundred units, shall be 6.5.

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

5. PACKAGING

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

5.1.1 Level A. Each pair of footwear covers, with the soles facing each other and reversed heel to toe, shall have the uppers laid flat and then wrapped around the soles and heels.

5.1.2 Commercial. Footwear covers shall be preserved to afford adequate protection against physical damage during shipment from the supply source to the first receiving activity. The contractor may use his standard practice when it meets this requirement. 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 Commercial (see 6.2).

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* 5.2.1 Level A. Sixty (60) pair of footwear covers, of one size only, packaged as specified in 5.1, shall be packed in a fiberboard shipping container assembled, closed, and reinforced conforming to type CF, class weather resistant variety DW, grade V15c, style RSC-L, CSSC-L, or OSC-L of PPP-B-636. The fiberboard for the box liner shall conform to type CF, class domestic, variety SW or DW, grade 275 of PPP-B-636. Level A packages shall be packed flat, four in length, one in width and fifteen in depth within the shipping container. The container inside dimensions shall approximate 22 inches in length, 15 inches in width and 11 inches in depth. Box closure shall be in accordance with method III and reinforcing in accordance with the appendix to PPP-B-636. Toward the end of the contract or when there are less than the required amount per container of the same size, mixed sizes may be packed within the same container.

* 5.2.2 Level B. Sixty (60) pair of footwear covers of one size only, packaged as specified in 5.1, shall be packed in a fiberboard shipping container assembled, closed, and reinforced conforming to type CF, class domestic, grade 275, variety SW or DW, style RSC-L, CSSC-L, or OSC-L of PPP-B-636. The fiberboard for the box liner shall conform to type CF, class domestic, variety SW or DW, grade 275 of PPP-B-636. Level A packages shall be packed flat, four in length, one in width, and fifteen in depth within the shipping container. The container inside dimensions shall approximate 22 inches in length, 15 inches in width, and 11 inches in depth. Box closure shall be in accordance with method II of PPP-B-636. Toward the end of the contract or when there are less than the required amount per container of the same size, mixed sizes may be packed within the same container.

5.2.3 Commercial. Footwear covers, 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 conform with the U.S. Postal Service Manual, Uniform Freight Classification Rules or National Motor Freight Classification Rules, as applicable.

* 5.3 Palletization. When specified (see 6.2), footwear covers packed as specified in 5.2, shall be palletized in accordance with load type I of MIL-STD-147. Each prepared load shall be bonded with primary and secondary straps in accordance with the bonding means K and L or bonding means O. Pallet patterns shall be in accordance with the appendix of MIL-STD-147. Interlocking of loads shall be effected by reversing the pattern of each course. If the container is of a size which does not conform to any other patterns specified in MIL-STD-147, the pallet pattern used shall first be approved by the contracting officer.

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

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6. NOTES

6.1 Intended use. The footwear covers are intended for the protection of personnel during the disassembly, cleaning, fueling, and other operations involved in the handling of torpedos (MK 46/48).

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

- (a) Title, number, and date of this specification.
- (b) Sizes required (see 1.2).
- (c) When a first article sample is required (see 3.2, 4.3, and 6.5).
- (d) Selection of applicable levels of preservation and packing (see 5.1 and 5.2).
- (e) When palletization is required (see 5.3).

6.3 Samples. For access to guide samples, address the procuring office issuing the invitation for bids.

6.4 The material specified in 3.3.2 may be United Elastic Style No. 6-600 or equal.

* 6.5 First article. When a first article is required, it shall be inspected and approved. The first article shall be a preproduction sample. The contracting officer should include specific instructions in all acquisition documents regarding arrangements for inspection and approval of the first article.

* 6.6 Changes from previous issue. The margins of this specification 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 irrespective of the marginal notations and relationship to the last previous issue.

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Project No. 8430-N329

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