

MIL-V-43544A

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SUPERSEDING

MIL-C-43544(GL)

20 September 1967

MILITARY SPECIFICATION

VEST, SMALL ARMS PROTECTIVE, BODY ARMOR

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 the design, materials, and fabrication of a vest carrier for small arms and protective body armor for air-crewmembers in three sizes: Short, Regular, and Long.

2. APPLICABLE DOCUMENTS

2.1 Government documents. Unless otherwise specified, the following documents of the issue in effect on date of invitation for bids or request for proposal, form a part of this document to the extent specified herein.

SPECIFICATIONS

FEDERAL

- V-T-285 - Thread, Polyester
- UU-P-268 - Paper, Kraft, Wrapping
- DDD-L-20 - Label: For Clothing, Equipage, and Tentage (General Use)
- PPP-B-636 - Boxes, Shipping, Fiberboard

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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 and Development 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.

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FSC 8470

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

## MIL-V-43544A

## MILITARY

- MIL-C-508 - Cloth, Oxford, Nylon, 3 Ounce
- MIL-B-543 - Buckles, Tongueless and Web Strap
- MIL-W-4088 - Webbing, Textile, Woven Nylon
- MIL-W-5664 - Webbing, Textile, Elastic, Cotton
- MIL-F-10884 - Fasteners, Snap
- MIL-F-21840 - Fastener Tape, Hook and Pile, Synthetic
- MIL-C-43191 - Cloth, Wind Resistant Sateen, Cotton and Nylon
- MIL-F-43539 - Felt, Ballistic, Nylon

## 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

## DRAWINGS

## U. S. ARMY NATICK RESEARCH AND DEVELOPMENT CENTER

- 2-3-205 - Vest, Small Arms Protective, Body Armor, assembly Complete
- 2-3-206 - Vest, Small Arms Protective, Body Armor; Front Assembly
- 2-3-207 - Vest, Small Arms Protective, Body Armor; Back Assembly
- 2-3-208 - Vest, Small Arms Protective, Body Armor; Details "A"
- 2-3-209 - Vest, Small Arms Protective, Body Armor; Details "B"
- 2-3-210 - Vest, Small Arms Protective, Body Armor; Details "C"
- 2-3-211 - Vest, Small Arms Protective, Body Armor; Details "D"
- 2-3-212 - Vest, Small Arms Protective, Body Armor; Details "E"
- 2-3-213 - Vest, Small Arms Protective, Body Armor; Sections "A"
- 2-3-214 - Vest, Small Arms Protective, Body Armor; Sections "B"
- 2-3-221 - Vest, Small Arms Protective, Body Armor; Details "F"

MIL-V-43544A

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

#### OTHER GOVERNMENT DOCUMENTS

##### JOINT COMMITTEE ON PRINTING (JCP) PUBLICATIONS

- JCP-A-60 - Government Paper Specification Standards
- JCP-L-50 - Government Paper Specification Standards

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

2.2 Other publications. Unless otherwise specified, the following documents of the issue in effect on date of invitation for bids or request for proposal, form a part of this document to the extent specified herein.

##### 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 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.

### 3. REQUIREMENTS

3.1 Guide samples. Samples of the end item when furnished, are solely for guidance and information to the contractor (see 6.5). Variations from this document may appear in the sample, in which case this document shall govern.

3.2 First article. When specified, a sample shall be subjected to first article inspection (see 4.3, 6.2 and 6.3).

## MIL-V-43544A

3.3 Materials (see 6.4).

3.3.1 Cloth, wind resistant sateen, cotton and nylon. The cotton and nylon cloth used for the body of the carrier, Olive Green 107, shall conform to class 1 of MIL-C-43191.

3.3.2 Cloth, oxford, nylon, 3 ounce. The nylon oxford cloth, for the pocket shall be dyed Olive Green 106, to match the standard sample, and conform to type I, class 1 of MIL-C-508.

3.3.3 Fasteners, tape, hook and pile, nylon. The nylon tape fasteners shall be dyed Olive Green 106 to match the standard sample and conform to type II, class 1, 1-inch and 2-inch width of MIL-F-21840.

3.3.4 Webbing, textile, elastic nylon. The 1-inch nylon elastic webbing used for the waistband retaining and side adjuster strap shall be Olive Green 106 and conform to type II, class 1 of MIL-W-5664.

3.3.5 Webbing, nylon. The nylon webbing shall be type II, class 1, 1-inch Olive Drab 7 conforming to MIL-W-4088.

3.3.6 Felt, nylon. The nylon felt filler for the shoulder pads and the cushion spall pads for the front and back assemblies of the carrier shall conform to MIL-F-43539.

3.3.7 Thread, polyester. The thread for all stitching shall be dyed shade Olive Drab S-1 (C.A. 66022) and shall conform to type 1, class 1, sub-class B of V-T-285. Thread size shall be as follows:

All stitching except where	
stitching is through felt	Size B
where stitching is through felt	Size E

3.3.8 Fastener, snap. The snap fasteners shall conform to style 2, finish 2 of MIL-F-10884, MS27980 as follows: button-1B, socket-6B-stud-7B, eyelet-8B.

3.3.9 Buckle, nonslip. The buckles shall conform to type V, class 3, size 1-inch, of MIL-B-543.

3.4 Construction. The construction shall conform in all respects to the drawings listed in Section 2 and as specified herein.

## MIL-V-43544A

3.4.1 Stitches, seams and stitchings. All stitchings, except bartacking, shall conform to FED-STD-751 as follows:

For all stitching except overedge stitching

Stitch type 301, 10 to 12 stitches per inch for stitching through felt  
8 to 10 stitches per inch

For overedge stitching

Stitch type 503 or 504, 8 to 12 stitches per inch with 3/16 minimum gage

3.4.1.1 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; and at least five tying, overlapping or back stitches are used to secure the ends of the stitching.

3.4.1.2 Type 301 stitching. Ends of all stitching shall be backstitched or overstitched not less than 1/2 inch except where ends are turned under or caught in other seams or stitching. Thread tensions 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 materials sewn. The lock shall be embedded in the materials sewn.

3.4.1.2.1 Repairs of type 301 stitching. Repairs of type 301 stitching shall be as follows:

a. When thread breaks, skipped stitches, run-offs, or bobbin runouts occur during sewing, the stitching shall be repaired by restarting the stitching a minimum of 1 inch back of the end of the stitching. 1/

b. Except for prestitching, thread breaks or two or more consecutive skipped or run-off stitches noted during inspection of the item shall be repaired by overstitching. The stitching shall start a minimum of 1 inch in back of the defective area, continue over the defective area, and continue a minimum of 1 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.

3.4.1.3 Types 503 and 504 stitching. Thread tension shall be maintained so that there will be no loose stitching. All repairs shall be in accordance with 3.4.1.2.1.a and 3.4.1.2.1.b except substitute 3/4 inch for 1 inch wherever 1 inch appears.

## MIL-V-43544A

3.4.1.4 Bartacks. Bartacks shall be as specified on the applicable drawing and as follows:

Length, $\pm$ 1/16 inch	Width, $\pm$ 1/32	Stitches per bartack
1/2 inch	1/16 inch	28
3/4 inch	1/16 inch	42

Bartacks shall be free from thread breaks and loose stitching.

3.4.1.5 Thread ends. All thread ends shall be trimmed to 1/4 inch length.

3.4.2 Setting of snap fasteners. A hole shall be prepunched to receive the button and eyelet components of the snap fasteners. The hole shall be smaller than the outside diameter of the button and eyelet barrels so that the barrel must be forced through the hole. The hole shall not be punched in the setting operation with the button or eyelet barrel. The fasteners shall be securely clinched without cutting the adjacent materials and no more than three splits shall occur in the button or eyelet barrels.

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

3.4.4 Skiving of nylon felt. The nylon felt used as the filler for the shoulder pads shall be skived in accordance with dimensions and in the location shown on Drawing 2-3-212.

3.5 Marking. All marking shall conform to DDD-L-20.

3.5.1 Identification marking. The letters U.S., stock number, front or back plate designation, size, and contract number, shall conform to type IV, class 9 in the size characters and location shown on Drawings 2-3-208 and 2-3-209. Fastness to class 9 labels shall be as specified for class 5 labels. The words "DO NOT DROP" shall be printed in characters 1 inch high on the front of the small pocket on the front portion of the carrier.

3.5.2 Instruction label. An instruction label shall be positioned on the body side of the back as shown on Drawing 2-3-209. The label shall conform to type VI, class 9, approximately 5-1/2 inches by 3 inches. Fastness to class 9 labels shall be as specified for class 5 labels. The characters used in printing the label shall be of maximum size commensurate with the area and contents specified. The label shall be printed to read across the narrow dimensions. The label shall be sewn in by stitching all around with a 1/8 inch stitch margin.

## MIL-V-43544A

3.5.2.1 Contents. The contents of the label shall be as follows:

## THIS ARMOR MAY SAVE YOUR LIFE

1. It will protect vital areas against small arms fire up to 30 cal. AP, shell and grenade fragments.
2. Armor can be put on with both shoulder straps attached, or with *one shoulder open*.
3. Wear over shirt. Lap waist bands over front to hold armor firmly in place, Adjust shoulder webbing straps, lifting the armor to cover lower neck area.
4. For quick release: a. Grasp loop at end of elastic webbing on right waist band and pull. b. Pull up snap fastener tab on right or left shoulder adjustment strap. c. For emergency, pull up on both left and right snap fastener tabs.
5. Keep touch-and-close fasteners free of foreign matter.
6. Do not drop the armor and wear it at all times in combat.
7. Do not wear the parachutes.
8. Do not remove protective armor plate from carrier.

3.5.3 Use and care booklet. A "Use and Care" booklet shall be furnished by the contractor with each vest assembly. The booklet shall be placed in the breast pocket. The printing, collation, folding and stitching of the booklet shall be in accordance with the standard sample (see 6.3). The cover shall be a vellum finish cover of white paper conforming to JCP-L-50, 130 pound weight basis 20 by 28 inches per 1000 sheets (see 4.4.1.1). The text paper shall be white offset book paper conforming to JCP-A-60, 120 pound weight basis 25 by 38 inches per 1000 sheets (see 4.4.1.1).

3.5.4 Location marks. Location marks shall not be drilled except for locating snap fasteners. Printed markings for component location shall not be more than 1/32 inch wide.

3.6 Fit. The finished vest shall fit the armor of applicable size for which it was designed, without strain on seams or excessive fullness. Armor required for fit examination shall be obtained from the contracting activity issuing the invitation for bids or request for proposal (see 4.4.4).

3.7 Repairs. Repairs such as mends, darns, patches or splices are not permitted on the carrier.

3.8 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 non-defective and properly matched components.

## MIL-V-43544A

3.9 Workmanship. The finished vest shall conform to the quality and grade of product established by this document. The occurrence of defects shall not exceed the applicable acceptable quality level.

## 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 otherwise disapproved by the Government. The Government reserves the right to perform any of the inspections set forth in the document where such inspections are deemed necessary to assure supplies and services conform to prescribed requirements.

4.2 Classification of inspection. 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, 4.4.4 and 4.4.5. 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 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 on the "Use and Care" booklet paper requirements specified in 3.5.3.

4.4.2 In-process inspection. Inspection of the components and subassemblies shall be made at appropriate stages of fabrication to determine conformance to the requirements of this document and the applicable drawing. The Government reserves the right to exclude from consideration for acceptance components for which in-process inspection has indicated nonconformance.

## MIL-V-43544A

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 vests. The sample unit shall be one vest. The inspection level shall be II and the acceptable quality level (AQL), expressed in terms of defects per hundred units, shall be 2.5 for major defects 6.5 for major and minor A combined defects, and 15.0 for total (major, minor A and minor B combined) defects.

TABLE I. End item visual defects

Examine	Defect	Classification	
		Major	Minor A B
Fabric	Any hole, cut, tear, smash, or broken or missing yarn	X	
	Any abrasion mark		X
Felt, nylon	Any hole, cut, or patch	X	
Fastener tape, hook and pile	Any cut, hole, or tear	X	
	Missing hooks	X	
	Hooks flattened	X	
Tape and webbing, nylon	Any hole, cut, or tear	X	
	Frayed or scalloped edges, not firmly or tightly woven. Ends not fused.	X	
Webbing, elastic	Cut, chafed, abraided, or otherwise damaged affecting serviceability	X	
Hardware: General	Broken or malformed; corroded areas; burrs or sharp edges	X	
	Finish omitted or not as specified - on brass		X
	- on steel	X	
	Size or type not as specified	X	
	Not assembled as specified, improperly set or reversed, failing to serve intended purpose	X	
Snap fasteners	Fastener not functioning properly i.e., fails to snap closed, provide a secure closure or to open freely	-	
		X	

NOTE: The fastener shall be snapped and unsnapped twice to determine whether parts of fastener separate freely and also effect a secure closure.

## MIL-V-43544A

TABLE I. End item visual defects (cont'd)

Examine	Defect	Classification	
		Major	Minor A B
Snap fasteners	Clinched excessively tight, cutting adjacent material	X	
	Clinched loosely, permitting any component to rotate freely but not to the degree that any component can be expected to become detached during use		X
	Clinched loosely to the degree that components can be expected to become detached during use	X	
	Incorrect style	X	
	More than three splits in eyelet or button barrels		X
	NOTE: Incomplete roll of end of button or eyelet barrel is evidence of improper and insecure clinching.		
Open seams	Up to and including 1/2 inch		X
	More than 1/2 inch		X
	NOTE: 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.		
Run-offs (see open seams)			
Raw edges (except where required)	More than 1/2 inch when securely caught in stitching		X
	NOTE: Raw edges not securely caught in stitching shall be classified as open seams.		
Seam and stitch type	Wrong seam or stitch type	X	
Stitching	Loose, resulting in loose bobbin or top thread; tight, resulting in tightness or puckering of fabric on seams		X

## MIL-V-43544A

TABLE I. End item visual defects (cont'd)

Examine	Defect	Classification	
		Major	Minor A B
Stitches per inch	One stitch less than minimum specified		X
	Two or more stitches less than minimum specified		X
	One or more stitches in excess of maximum specified		X
	NOTE: Variation in the number of stitches per inch caused by operator speeding up the machine and pulling the fabric in order to sew over heavy places, or in turning corners shall be classified as follows:		
	(a) within the minor B defect classification - no defect		
	(b) within the minor A defect classification - Minor B defect		
Stitching margins, stitching gage	Not as specified		X
Stitching ends	Not backstitched as specified, except where ends are turned under in a hem or held down by other stitching		X
	Less than five tying, overlapping, or backstitching in cross box stitching or W-W stitching (when performed on automatic machine)		X
Thread breaks	On stitching other than W-W stitching, overstitched less than 1 inch in each direction beyond defective stitching area		X
	On W-W stitching, overstitched less than 1/2 inch in each direction beyond the defective stitching area		X
	NOTE: Thread breaks not backstitched shall be classified as open seams.		

## MIL-V-43544A

TABLE I. End item visual defects (cont'd)

Examine	Defect	Classification	
		Major	Minor A B
Stitching rows	One or more required rows of stitching omitted:		
	- seriously affecting serviceability	X	
	- affecting serviceability but not seriously		X
"W" stitching	Height of "W" stitching less than specified by more than 1/8 inch		X
Cleanness	Noticeable grease or oil stains, thread ends not trimmed throughout		X
Components and assembly	Any component or required operation omitted (unless otherwise classified herein)	X	
	Needle chews	X	
	Seams pleated or badly puckered		X
	Mends, darns, or patches	X	
Hems	Less than specified width on hems required to finish less than 3/4 inch		X
	Less than specified width by more than 1/8 inch on hems required to finish 3/4 inch or more		X
Pockets and flap	Pocket set off center by more than 1/4 inch		X
	Pencil pocket not parallel with center pocket by more than 1/8 inch		X
	Pockets or flap not formed as specified		X
	Flap improperly set or distorted, failing to effect a full and smooth closure		X
Bartacks	One or more bartacks omitted		X
	Any bartack not as specified or not in specified location		X
Reinforcements	Omitted or mislocated		X

## MIL-V-43544A

TABLE I. End item visual defects (cont'd)

Examine	Defect	Classification	
		Major	Minor A B
Ends of shoulder straps	Not turned under and sewn as specified	X	
Marking	Omitted, incorrect, illegible, misplaced, or size of characters not as specified	X	
Instruction label	Omitted, illegible, misplaced, or not type and class specified	X	
Use and Care booklet	Omitted		X

4.4.4 Fit examination. The end item shall be examined for the defects listed in table II. The lot size shall be expressed in units of vests. The sample unit shall be one vest. The inspection level shall be S-3 and the AQL, expressed in terms of defects per hundred units, shall be 4.0 for minor defects. Any major defect shall cause rejection of the lot.

TABLE II. Fit defects

Examine	Defect	Classification	
		Major	Minor
Fit of armor in vest	NOTE: Fit examination shall be accomplished with the armor for which the vest is designed. The inspector shall ease the armor into the vest without effort and close the opening securely with the touch and hold fastener tape.		
	Cover too small, i.e., armor fails to fit in vest	X	
	Touch and hold fastener fails to effect a smooth and secure closure		X
	Cover too large, showing excessive fullness or wrinkles		X

## MIL-V-43544A

4.4.5 End item dimensional examination. The end item shall be examined for conformance to the dimensions specified on the drawing. Any dimension not within the specified tolerance shall be classified as a defect. The lot size shall be expressed in units of vests. The sample unit shall be one vest. The inspection level shall be S-3 and the AQL, expressed in terms of defects per hundred units, shall be 6.5.

4.4.6 Packaging inspection. An examination shall be made to determine that preservation, packing, and marking comply with the section 5 requirements. Defects shall be scored in accordance with table III. The sample unit shall be one shipping container fully packaged. The lot shall be expressed in units of shipping containers. The inspection level shall be S-2 and the AQL, expressed in terms of defects per hundred units, shall be 4.0.

TABLE III. Packaging defects

<u>Examine</u>	<u>Defects</u>
Marking (interior and exterior container)	Omitted; incorrect; illegible; of improper size, location, sequence, or method of application.
Materials	Component missing, damaged, defective, or not as specified.
Workmanship	Inadequate application of components, such as: incomplete closure of container flaps, loose strapping, or taping, inadequate stapling. Bulged or distorted container.
Content	Number per container not as specified

4.4.7 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 table IV. The sample unit shall be one palletized unit load fully packaged. The lot size shall be the number of palletized unit loads in the inspection lot. The inspection level shall be S-1 and the AQL, expressed in terms of defects per hundred units, shall be 6.5.

## MIL-V-43544A

TABLE IV. Palletization defects

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

## 5. PACKAGING

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

5.1.1 Level A. Five vests of one size only, each alternately reversed top to bottom shall be stacked to form a bundle. Prior to bundling, each vest shall be completely assembled with straps and flaps secured in position. The bundle shall be securely cross-tied with cotton tape or twine.

5.1.2 Commercial. Carriers 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. Thirty vests of one size only, preserved as specified in 5.1, shall be packed within a snug-fitting fiberboard container conforming to style RSC-L, V2s of PPP-B-636. The inside of each container shall be fitted with a box liner conforming to type CF, class weather-resistant, variety DW, grade V15c of PPP-B-636. Level A bundles shall be packed flat, two in length, one in width and three in depth within a shipping container. Each container shall have the contents completely covered on the top and-bottom with a sheet of 30-pound minimum basis weight kraft paper conforming to type I, grade B of UU-P-268. Each container shall be closed in accordance method III, water-

## MIL-V-43544A

proofed in accordance with method V, and reinforced as specified in the appendix of PPP-B-636, except that the inspection shall be in accordance with 4.4.6. 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 packing. Thirty vests of one size only, preserved as specified in 5.1, shall be packed within a snug-fitting fiberboard shipping container conforming to style RSC-L, type CF, variety SW, or SF, class domestic, grade 275, variety SW of PPP-B-636. The inside of each shipping container shall be fitted with a box liner conforming to type CF, variety DW, class domestic, grade 275 of PPP-B-636. Level A bundles shall be packed flat, two in length, one in width and three in depth with a shipping container. Each fiberboard container shall have the contents completely covered on the top and bottom with a sheet of 30-pound minimum basis weight kraft paper conforming to type I, grade B of UU-P-268. 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 in accordance with 4.4.6. 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.

5.2.2.1 Weather-resistant fiberboard 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 in accordance with 4.4.6.

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

5.3 Palletization. When specified (see 6.2), vests packed as specified in 5.2, shall be palletized on a 4-way entry pallet in accordance with load type Ia of MIL-STD-147. Each prepared load shall be bonded with primary and secondary straps in accordance with bonding means K and L or film bonding means O and P. Pallet pattern 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 of the pallet 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 purchase order, interior bundles, shipping containers and palletized unit loads shall be marked in accordance with MIL-STD-129 or ASTM D 3951, as applicable. Each bundle shall have attached a manila shipping tag printed with identification marking.

## MIL-V-43544A

5.4.1 Labels, mixed sizes. Each shipping container, packed with mixed sizes, shall have securely attached to the end and side, directly under the printing or stenciling, a white paper label 5 by 4 inches, with the words "MIXED NSN'S" plainly stamped or printed thereon, and under these words shall be legibly printed the correct quantity of NSN's container therein.

## 6. NOTES

6.1 Intended use. The vest is intended to be worn by combat aircrewmembers to hold protective body armor LP/P DES 1-82 in place.

6.2 Ordering data. Acquisition documents should specify the following:

- a. Title, number, and date of this document.
- b. When a first article sample is required (see 3.2, 4.3, and 6.3).
- c. Selection of the applicable level of preservation 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).
- e. When palletization is required (see 5.3).
- f. Size of vest to be procured.

6.3 First article. When a first article sample is required, it shall be inspected and approved under the appropriate provisions of FAR 52.209. The first article should be a preproduction sample consisting of one completed vest. The contracting officer should include specific instructions in all acquisition documents regarding arrangements for inspection and approval of the first article.

6.4 Recycled material. It is encouraged that recycled material be used when practical as long as it meets the requirements of the document (see 3.3).

6.5 Samples. For access to samples, address the contracting office issuing the invitation for bids.

6.6 Changes from previous issue. Asterisks are not used in this revision to identify changes with respect to the previous issue due to the extensiveness of the changes.

MIL-V-43544A

**Custodians:**

Army - GL  
Navy - MC  
Air Force - 99

**Preparing activity:**

Army - GL  
Project No. 8470-0103

**Review activities:**

Army - MD, MR  
Air Force - 82  
DLA - CT