

MIL-C-44223(GL)

5 May 1986

## MILITARY SPECIFICATION

## COVER; PROTECTIVE, MINE DISPENSER

This specification is approved for use by the Natick Research, Development and Engineering Center, Department of the Army, and is available for use by all Department and Agencies of the Department of Defense.

## 1. SCOPE

1.1 Scope. This document covers a protective dust cover for use with the XM-138 (Flipper) mine dispenser.

## 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

- DDD-L-20 - Label: For Clothing, Equipage, and Tentage,  
(General Use)
- PPP-B-601 - Boxes, Wood, Cleated Plywood
- PPP-B-621 - Boxes, Wood, Nailed and Lock-Corner
- PPP-B-636 - Boxes, Shipping, Fiberboard

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/R

FSC 1095

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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, DEVELOPMENT AND ENGINEERING CENTER

5-10-43 - Cover; Protective, Mine Dispenser: Assembly

5-10-44 - Gusset, Side, Assembly

5-10-45 - Top and Back, Assembly

5-10-46 - Strap, Assembly

5-10-47 - Fastener

PUBLICATION

DEPARTMENT OF THE ARMY FIELD MANUAL

FM 10-16 - General Repair of Tents, Canvas and Webbing

(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 officer.)

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 generally available for reference from libraries. They are also distributed among technical groups and using Federal agencies.)

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2.3 Order of precedence. In the event of a conflict between the text of this document and the references cited herein (except for associated detail specifications, specification sheets, or MS standards), the text of 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 and components. Materials (see 6.4) and components shall be as specified on the applicable drawings and parts lists. Materials not definitely specified shall be of the quality normally used by the contractor provided that the completed item complies with all provisions of this document.

3.3 Construction. Construction shall conform to the drawings listed in section 2 and be as specified herein.

3.3.1 Stitching machine.

3.3.1.1 Types of stitching. All stitch types shall conform to FED-STD-751 as follows:

- |                                     |  |
|-------------------------------------|--|
| For all stitching except bartacking | - Type 301, 5 to 7 stitches per inch                                     |
| For bartacking                      | - Bartack, 1/2 (+ 1/8 - 1/16) inch long, 1/8 inch bight, and 28 stitches |

3.3.1.2 Thread breaks. Thread breaks in stitching shall be overstitched not less than 1 inch at each break on stitch type 301. Thread breaks noted during inspection shall be repaired by overstitching the existing stitching starting from a distance of 1 inch before the break, across the defective area, to a distance of 1 inch beyond the break. The ends of repair stitching are not required to be backstitched.

3.3.1.3 Stitching ends. Stitching ends shall be overstitched not less than 1 inch on stitch type 301 except where ends are turned under in a hem or held down by other stitching. Where 301 stitching is performed automatically to produce stitch patterns (such as box, box with cross-stitch or, "W" stitching or straight line tacking), at least three tying, overlapping, or backstitches shall be used to secure the ends of stitching.

3.3.1.4 Skipped stitches. Two or more skipped stitches occurring consecutively in stitch type 301 shall be overstitched not less than 1 inch on each side of a skip.

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3.3.1.5 Stitching margins. Unless otherwise specified, all stitch margins shall be  $1/8 + 1/16 - 0$  inch.

3.3.1.6 Lubrication of thread. The addition of any lubricant to the polyester thread prior to or during the sewing operation is prohibited.

3.3.2 Splicing of cover. If required, the cover shall be spliced as shown on Drawing 5-10-43.

3.3.3 Repairs. All necessary repairs shall be effected in accordance with the Department of the Army Field Manual FM 10-16 except that hand-sewn patches, other than specified herein, will not be acceptable.

3.4 Marking. All markings and labels shall conform to DDD-L-20.

3.4.1 Special markings. The letters "U.S." on the cover shall conform to type IV, class 9 in the size characters and in the location shown on the drawings. Class 9 markings shall be clearly legible after subsection to accelerated weathering.

3.4.2 Identification label. Identification labels shall conform to type VI, class 6 and shall be 3-1/2 inches by 5-1/2 inches minimum. A blank space of at least 1-1/4 inches shall be provided on the bottom of the label for the Department of Defense inspector's stamp. Identification labels shall be stitched to the liner in the location shown on the drawing.

3.5 Workmanship. Cloth components shall be clean and free of holes, cuts, tears, or cloth defects such as thin or weak places caused by abrasion, exposed fabric, blisters, loose edges or delamination of coating, creases, wrinkles, or missing coating. Webbing shall contain no frayed or scalloped edges. Thread tension shall be maintained so that there will be no loose stitching and seam allowances shall be maintained with seams properly sewed so that no run-offs, pleats, or open seams result. Care shall be taken in sewing so that there shall be no needle chews. All thread ends shall be trimmed to 1/2 inch or less.

#### 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 inspection set forth in the 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

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of the contractor's overall inspection system or quality program. The absence of any inspection requirements 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.

4.2 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 listed in tables I, and II. 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.

4.4.2 In-process inspection. In-process examination shall be performed to determine conformance to the requirement that no lubricant be used on the polyester thread. Any nonconformance shall be cause for rejection of the thread and any involved end items.

4.4.3 End item visual examination. The cover shall be examined for the defects listed in table I. The lot size shall be expressed in units of covers. The sample unit shall be one cover. 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 and 15.0 for total (major and minor combined) defects.

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TABLE I. End item visual defects

Examine	Defect	Classification	
		Major	Minor
Cloth, coated (basic material)	Hole, cut or tear; thin or weak place due to abrasion; exposed fabric; blister, tunnel or delamination of coating; crease or wrinkle	X	
	Lumps or heavy coated area		X
Cloth, coated, nylon (reinforcement)	Any uncoated area	X	
	Any pit, blister, tunnel, or delamination of coating	X	
	Any lump or heavily coated area Uneven coating, thin area where coating is noticeably thinner		X
Webbing	Frayed or scalloped edge		X
	Cut end not fused		X
Fastener, buckle	Broken	X	
Open seams	1/2 inch or less		X
	More than 1/2 inch	X	
	NOTE: A seam shall be classified as open when one or more stitches joining a seam are broken or when two or more skipped or run-off stitches occur. On double stitching seams, a seam shall be considered open when either one or both sides of the seam are open.		
Raw edges	More than 1/2 inch when securely caught in other stitching		X
	NOTE: Raw edges not securely caught in stitching shall be classified as open seams.		
Run-offs	(See open seams)		
Seam and stitch type	Wrong seam or stitch type	X	

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

Examine	Defect	Classification	
		Major	Minor
Stitch tension	Loose, resulting in a loosely exposed top or bobbin thread; tight, resulting in excessive tightness of fabric on seams		X
Stitches per inch	One stitch less than minimum specified		X
	Two or more stitches less than minimum specified	X	
	One or two stitches in excess of maximum specified		X
	More than two stitches in excess of maximum specified	X	
	NOTE: Variation in the number of stitches per inch, caused by the operator speeding up the machine and pulling the fabric in order to sew over heavy places or heavy seams or in turning corners, shall be classified as follows:		
	a. Within the major defect classification - Minor defect		
	b. Within the minor defect classification - No defect		
Stitching margins	Larger than specified for more than 2 inches		X
Mends, darns or patches	Repairs not in accordance with Department of the Army Field Manual FM 10-16 or not authorized by the contracting officer (see 3.3.3)	X	
Components and assembly	Any component part omitted, not assembled or fabricated of applicable specified material	X	
Hems	Constructed with partial turnunder when double turnunder is required		X
	Twisted or pleated		X
Reinforcement	Improperly applied, causing excessive fullness on reinforcement or reinforcement parts	X	

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

Examine	Defect	Classification	
		Major	Minor
Cloth splicing	Spliced pieces (side gusset only) not joined as shown on Drawing 5-10-44		X
	Splice in other than gusset	X	
Marking and label	Omitted, incorrect, illegible, or misplaced		X
Cleanness	Grease or oil stains; thread ends not trimmed to 1/2 inch or less		X

4.4.4 End item dimensional examination. The end item shall be examined for the defects listed in table II. The lot size shall be expressed in units of covers. The sample unit shall be one cover. The inspection level shall be I and the AQL, expressed in terms of defects per hundred units, shall be 2.5 for major defects and 6.5 for total (major and minor combined) defects.

TABLE II. End item dimensional defects

Examine	Defects	Classification	
		Major	Minor
Overall dimensions	Smaller than specified dimensions, less applicable minus tolerance, but not smaller than twice the applicable minus tolerance		X
	Smaller than specified dimensions, less twice the applicable minus tolerance	X	
	Larger than specified dimensions and applicable plus tolerance		X
Component and location dimensions (not otherwise classified herein)	Not within specified tolerance		X

4.4.5 Packaging examination. The fully packaged end items shall be examined for the defects listed in table III. 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.



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TABLE III. Packaging defects

<u>Examine</u>	<u>Defect</u>
Marking	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.
Contents	Number per container is more or less than required.

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.

TABLE IV. Palletization defects

<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 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 cover shall be folded to measure 18 inches in length by 11 inches in width. The folded cover shall be unit packed in a fiberboard

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box conforming to style RSC, type CF, variety SW, class domestic, grade 200 of PPP-B-636. The inside dimensions of the box shall approximate 19 inches in length, 12 inches in width, and 4-1/2 inches in depth. Each box shall be closed in accordance with method I as specified in the appendix of PPP-B-636.

5.1.2 Commercial. Covers 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 covers, preserved as specified in 5.1, shall be packed in a snug-fitting wood-cleated plywood box or nailed wood shipping container conforming to overseas type, style A or J, grade A or B, type I load of PPP-B-601, or class 2, style 2 or 4, grade A or B, type I load of PPP-B-621. The inside dimensions of each shipping container shall approximate 25 inches in length, 19-1/2 inches in width, and 15 inches in depth. Approximate dimensions are furnished as a guide only. Shipping containers shall be closed and strapped in accordance with the appendix of the applicable container specification.

5.2.2 Level B packing. Six covers, preserved as specified in 5.1, shall be packed in a snug-fitting fiberboard shipping container conforming to style RSC, type CF (variety SW) or SF, class domestic, grade 275 of PPP-B-636. Each shipping container shall be closed in accordance with method II as specified in the appendix of PPP-B-636. Approximate inside dimensions shall be as specified in 5.2.1.

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

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

5.3 Palletization. When specified (see 6.2), covers, packed as specified in 5.2, shall be palletized on a 4-way entry pallet in accordance with load type I or Ia, as applicable of MIL-STD-147. Pallet type shall be type I (4-way entry), type III, type IV, or type V in accordance with MIL-STD-147. Each prepared load shall be bonded with primary and secondary straps in accordance with bonding means K or L or film bonding O or P. Pallet pattern shall be load pattern 90 in accordance with the appendix of MIL-STD-147. Interlocking of loads shall be effected by reversing the patterns of each course.

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

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6. NOTES.

6.1 Intended use. The cover is designed to protect the XM-138 Mine Dispenser (FLIPPER) from dust infiltration.

6.2 Ordering data. Acquisition documents should specify the following:

- a. Title, number, and date of this document.
- b. When a first article is required (see 3.1, 4.3, and 6.3).
- c. Selection of applicable levels 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 5.2.2.1).
- e. When palletization is required (see 5.3).

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

Custodian:

Army - GL

Review activity:

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Preparing activity:

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Project No. 1095-0176

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**NOTE:** This form may not be used to request copies of documents, nor to request waivers, deviations, or clarification of specification requirements on current contracts. Comments submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or to amend contractual requirements.

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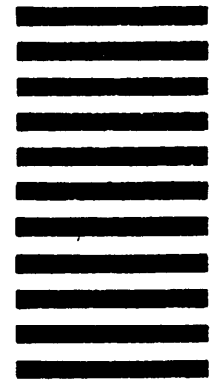
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## STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

*(See Instructions - Reverse Side)*

1. DOCUMENT NUMBER MIL-C-44223(GL)	2. DOCUMENT TITLE COVER; PROTECTIVE, MINE DISPENSER
3a. NAME OF SUBMITTING ORGANIZATION	4. TYPE OF ORGANIZATION (Mark one)
b. ADDRESS (Street, City, State, ZIP Code)	<input type="checkbox"/> VENDOR  <input type="checkbox"/> USER  <input type="checkbox"/> MANUFACTURER  <input type="checkbox"/> OTHER (Specify): _____
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	b. WORK TELEPHONE NUMBER (Include Area Code) - Optional
c. MAILING ADDRESS (Street, City, State, ZIP Code) - Optional	8. DATE OF SUBMISSION (YYMMDD)