

MIL-C-13489D  
14 February 1985  
SUPERSEDING  
MIL-C-13489C  
24 June 1976

MILITARY SPECIFICATION

COVER AND END CURTAINS; CARGO BODY  
(FOR MILITARY VEHICLES)

This specification is approved for use by US Army Tank-Automotive Command, Department of the Army, and is available for use by all Departments and Agencies of the Department of Defense.

1. SCOPE

1.1 Scope. This specification covers one type of cotton-duck cover and end curtains of cotton-duck intended for use on cargo bodies of military vehicles.

2. APPLICABLE DOCUMENTS

2.1 Government documents.

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

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: US Army Tank-Automotive Command, ATTN: AMSTA-GSS, Warren, MI 48397-5000, by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document, or by letter.

FSC 2540

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SPECIFICATIONS  
FEDERAL

T-R-571	- Rope, Cotton.
T-R-605	- Rope, Manila and Sisal.
TT-I-1795	- Ink, Marking, Stencil, Opaque Porous and Non (Porous Surfaces).
TT-P-98	- Paint, Stencil, Flat.
CCC-C-419	- Cloth, Duck, Cotton, Unbleached, Plied-Yarns, Army and Numbered.
CCC-C-428	- Cloth, Duck, Cotton: Fire, Water, Weather, and Mildew Resistant.

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MIL-T-43566	- Tape, Textile, Cotton, General Purpose, Natural or in Colors.
MIL-R-24049	- Rope, Polypropylene.

STANDARDS  
FEDERAL

FED-STD-595	- Colors.
FED-STD-751	- Stitches, Seams, and Stitching.

MILITARY

MIL-STD-105	- Sampling Procedures and Tables for Inspections by Attributes.
MS 51323	- Cover, Fitted, Vehicular Body-Top.
MS 51324	- Curtain, Vehicular-End.

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

DRAWINGS  
ARMY

7527188	- Fabrication and Treatment of Thread for Fabric Items.
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(Copies of specifications, standards, handbooks, drawings, and publications required by manufacturers in connection with specific acquisition functions should be obtained from the contracting activity or as directed by the contracting officer.)

2.2 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.

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## 3. REQUIREMENTS

3.1 Materials. The materials used herein shall conform to the requirements of this specification and to applicable military standards, specifications, and drawings.

3.1.1 Cover, end curtain main body, and flap. The cover, end curtain and flap shall be fabricated of cotton duck conforming to No. 8, type I of CCC-C-419 and treated in accordance with class 1 of CCC-C-428 (see 4.3.1).

3.1.2 Reinforced corners and pads. Reinforced corners and pads with hemmed edges of size shape, and in the position required to protect the cover from body corners shall be fabricated of cotton duck conforming to No. 6, type 1 of CCC-C-419 and treated in accordance with class 1 of CCC-C-428 (see 4.3.1).

3.1.3 End curtain rollup straps. End curtain rollup strap webbing shown on applicable military standards shall conform to MIL-T-43566, type 1, class 4 (see 4.3.1).

3.1.4 Rope. The rope shall be cotton conforming to T-R-571, or sisal conforming to T-R-605, or polypropylene conforming to MIL-R-24049, type I, and shall be of 3/8 inch nominal diameter. The rope shall be treated for mildew resistance in accordance with manufacturer's standard practice (see 4.3.1).

3.1.5 Thread. Thread shall conform to specifications shown on Drawing 7527188 for various weights of fabric (see 4.3.1).

3.2 Design and construction. Design and construction of the cover and end curtains shall conform to the contour and dimensions shown on MS 51323 and MS 51324 (see 4.3.2).

3.2.1 Stitching. Stitching shall conform to that shown on Drawing 7527188 (see 4.3.2).

3.2.1.1 Seams and hems. Seams and hems shall conform to the applicable types of FED-STD-751, as specified in 3.2.1.2 through 3.2.1.7 (see 4.3.2).

3.2.1.2 Stitching type EFa-1. Stitching type EFa-1 shall be used for hemming all raw edges of duck to prevent raveling.

3.2.1.3 Stitching type Efb-1. Stitching type Efb-1 with two rows of stitches shall be used for all hemming, except as otherwise specified herein or otherwise indicated on applicable military standards.

3.2.1.4 Seam type LSa-2. Seam type LSa-2 shall be used for joining two selvage edges.

3.2.1.5 Seam type LSB-2. Seam type LSB-2 shall be used for joining one selvage edge and one raw (hemmed) edge.

3.2.1.6 Seam type LSc-2. Seam type LSc-2 shall be used for joining two raw (hemmed) edges.

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3.2.1.7 Seam type LSd-2. Seam type LSd-2 shall be used for canvas reinforcements.

3.2.2 Fasteners. Curtain flaps shall be furnished with not less than three fasteners, as shown on the applicable military standard, to hold the flaps securely in either closed or open position (see 4.3.2).

3.2.3 Roll up straps. The length and position of attachment of the roll up straps shall be as shown on the applicable military standard (see 4.3.2).

3.2.4 Reinforcement strap. Reinforcement strap, with hemmed edges fabricated of the same material as the curtain (see 3.1.1), shall be provided, and shall extend along the entire top and vertical edges of the curtain. The strap shall be attached to the curtain with four rows of stitching; or a folded section of the curtain may be used with four rows of stitching (see 4.3.2).

3.2.5 Webbing buckle pads. Webbing buckle pads shall be securely attached to the cover by stitching, class 301 of FED-STD-751, on all edges of the pad (see 4.3.2).

3.2.6 Cover and end curtain rope. One end of the cover and end curtain rope, shall be whipped with waxed thread or bound with a metal clip when so specified on the applicable military standard. The other end shall be spliced through the cover grommet (see 4.3.2).

3.3 Color. Unless otherwise specified (see 6.2), the color of the cover and end curtains, straps, pads, fastener, webbing buckle pads, etc., shall be green 383 matching color chip No. 34079 of FED-STD-595 (see 4.3.2).

3.4 Marking. Covers and end curtains shall be marked as shown on applicable military standards. Black ink conforming to TT-I-1795 or paint conforming to TT-P-98 shall be used for stenciling (see 4.3.2).

3.5 Workmanship. Workmanship employed in fabricating shall be of a quality necessary to produce covers and end curtains free from defects which will adversely affect their functioning or appearance. All fabrics shall be clean and free of grease or dirt. All metal parts shall have a smooth finish and be free from defects (see 4.3.2).

#### 4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order (see 6.2), 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 or witness any of the inspections set forth in the specification where such inspections are deemed necessary to assure supplies and services conform to prescribed requirements.

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4.2 Quality conformance inspection.4.2.1 Sampling.

4.2.1.1 Lot formation. Unless otherwise specified (see 6.2), a lot shall consist of all covers and end curtains of the same part number from an identifiable production period, from one manufacturer, submitted at one time for acceptance.

4.2.1.2 Sampling for examination. Samples for quality conformance examination shall be selected in accordance with general inspection level II of MIL-STD-105.

4.2.2 Quality conformance examinations.

4.2.2.1 Acceptable quality level. Each sample selected in accordance with 4.2.1.2 shall be examined to determine conformance to the following acceptable quality levels (AQL) on the basis of percent defective.

<u>Classification</u>	<u>AQL</u>
Major	1.0
Minor	2.5

4.2.2.2 Classification of defects. For examination purposes, defects shall be classified as specified in table I. Items in the sample containing one or more defects shall be rejected and if the number of defective items in any one sample exceeds the acceptance number for that sample, the lot represented by the sample shall be rejected.

TABLE I. Classification of defects.

<u>Category</u>	<u>Defect</u>	<u>Method of inspection</u>
<u>Critical</u>	<u>None</u>	
<u>Major</u>	<u>AQL 1.0% Defective</u>	
101	Incorrect dimensions affecting interchangeability (see 3.2).	SIE <u>1/</u>
102	Improper stitching and seam requirements (see 3.2.1 through 3.2.1.7).	Visual
103	Faulty workmanship affecting function (see 3.5).	Visual
<u>Minor</u>	<u>AQL 2.5% Defective</u>	
201	Incorrect dimensions not affecting interchangeability (see 3.2).	SIE <u>1/</u>
202	Color of cover and end curtains, etc. (off shading, see 3.3).	Visual
203	Faulty identification marking (see 3.4).	Visual
204	Faulty workmanship affecting appearance (see 3.5).	Visual

1/ SIE = Standard Inspection Equipment

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4.3 Methods of inspection.

4.3.1 Materials and construction. To determine conformance to 3.1 through 3.4, inspection and material certification records shall be maintained by the contractor. Records shall be subject to review by the Government and shall include date, part, or characteristic identification, inspection results, and disposition of lot (accepted or rejected). Corrective action taken on noted defects shall be subject to approval by the Government.

4.3.2 Defects. Conformance to 3.1.1 through 3.5 shall be determined by examination for the defects listed in table I. Examination shall be visual, tactile, or by measurement with standard inspection equipment.

4.4 Inspection of preparation for delivery. The Government inspector shall, at unscheduled intervals, inspect all materials and processes involved in the preparation for delivery, to determine conformance to requirements of Section 5 and specifications referenced herein. Any evidence of deviation from specified requirements shall be cause for refusal to conduct further inspection until objective evidence has been provided by the contractor that corrective action has been taken.

## 5. PACKAGING

5.1 Preservation, packaging, packing, and marking. Preservation, packaging, packing, and marking for the desired level shall be in accordance with the applicable packaging standard or packaging data sheet specified by the contracting authority (see 6.2).

## 6. NOTES

6.1 Intended use. The covers and end curtains covered by this specification are intended for use as a protective cover for the cargo in cargo bodies of military vehicles.

6.2 Ordering data. Acquisition documents should specify the following:

- a. Title, number, and date of this specification.
- b. Drawing number of fabrication and treatment of thread for fabric items.
- c. Applicable MS part number (see 3.2).
- d. Color, specify, if other than forest green (see 3.3).
- e. If responsibility for inspection shall be other than as specified (see 4.1).

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- f. Lot size, if other than as specified (see 4.2.1.1).
- g. Selection of applicable levels of preservation, packaging, packing, and marking (see 5.1).

Custodian:

Army - AT  
Navy - YD

Preparing activity:

Army - AT

Review activity:

DCSC - CS

(Project No. 2540-0332)

User activities:

Army - AT  
Navy - MC

## STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

*(See Instructions – Reverse Side)*

1. DOCUMENT NUMBER	2. DOCUMENT TITLE
3a. NAME OF SUBMITTING ORGANIZATION	4. TYPE OF ORGANIZATION <i>(Mark one)</i>
b. ADDRESS <i>(Street, City, State, ZIP Code)</i>	<input type="checkbox"/> VENDOR <input type="checkbox"/> USER <input type="checkbox"/> MANUFACTURER <input type="checkbox"/> OTHER <i>(Specify):</i> _____
5. PROBLEM AREAS	
a. Paragraph Number and Wording:	
b. Recommended Wording:	
c. Reason/Rationale for Recommendation:	
6. REMARKS	
7a. NAME OF SUBMITTER <i>(Last, First, MI) – Optional</i>	b. WORK TELEPHONE NUMBER <i>(Include Area Code) – Optional</i>
c. MAILING ADDRESS <i>(Street, City, State, ZIP Code) – Optional</i>	8. DATE OF SUBMISSION <i>(YYMMDD)</i>

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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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