

MIL-L-43541

15 September 1967

## MILITARY SPECIFICATION

## LEATHER, CATTLEHIDE, FOR VISORS AND CHINSTRAPS

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

## 1. SCOPE

1.1 Scope.- This specification covers the requirements for vinyl finished, embossed, corrected grain, cattlehide leather (see 6.1).

1.2 Classification.- The leather shall be furnished in the following types, as specified (see 6.2).

- Type I - Grain side dyed and finished in Black, Shade 111, embossed with fine haircell grain pattern.
- Type II - Grain side dyed and finished in Hatters' Green, Shade 245, embossed with heavy skiver grain pattern.
- Type III - Grain side dyed and finished in Pearl Gray, Shade 1564, embossed with heavy skiver grain pattern.

## 2. APPLICABLE DOCUMENTS

2.1 The following documents of the issue in effect on date of invitation for bids or request for proposal, form a part of this specification to the extent specified herein:

## SPECIFICATIONS

## FEDERAL

KK-L-311 - Leather; Methods of Sampling and Testing.

## MILITARY

MIL-L-43432 - Leather, Packaging and Packing of.

(Copies of specifications, standards, drawings and publications required by suppliers in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer.)

## 3. REQUIREMENTS

3.1 The requirements specified in 3.5.1, 3.5.2, section 5, and in related provisions of section 4, apply only to leather purchased directly by the Government.

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3.2 Standard sample.- The color and embossing on the grain side of the leather shall match the standard sample (see 6.4).

3.3 Material.- The leather shall be made from cattlehide.

3.4 Tannage.- The leather shall be chrome tanned, vegetable tanned or vegetable and chrome combination tanned. Types II and III leather may be impregnated with a resin during the tanning process or the finishing operation in order to provide the leather with the desired firmness and stiffness (see 6.3).

3.5 Physical requirements.-

3.5.1 Trim (form and area).- The leather shall be furnished in the form of sides, backs, bends or shoulders and shall be trimmed to conform with the definitions as listed under "Definition of Terms" in KK-L-311. The area in terms of square feet shall be legibly marked in the butt area on the flesh side of the leather except that shoulders shall be marked on the flesh side in the corner formed by the straight edge cut and belly cut.

3.5.2 Thickness.- The thickness of the leather shall be as specified (see 6.2) when tested as specified in 4.3.

3.5.3 Color.- The color of the leather shall be as required for the type specified (see 1.2).

3.5.4 Finish.- The grain surface shall be buffed or snuffed only to the extent that is necessary to remove superficial blemishes. The leather shall be finished on the grain side with a priming coat of an acrylate base dispersion or latex resin dispersion or combination of both in order to seal the pores of the leather. No less than two additional coats of a vinyl resin solution shall be applied to the grain side to provide water repellency and spot resistance. The grain side of the finished leather shall be embossed as required for the type specified (see 1.2).

3.5.5 Resistance to spotting and blistering.- The leather shall not spot, discolor or blister when tested as specified in 4.3.

3.5.6 Tackiness.- The leather shall not become tacky when tested as specified in 4.3.

3.5.7 Shrinkage temperature.-

3.5.7.1 Chrome tannage.- Shrinkage of the chrome tanned leather shall not take place at or below 99°C when tested as specified in 4.3.

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3.5.7.2 Vegetable tannage.- Shrinkage of the vegetable tanned leather shall not take place at or below 75°C when tested as specified in 4.3.

3.5.7.3 Vegetable and chrome combination tannage.- Shrinkage of the vegetable and chrome combination tanned leather shall not take place at or below 90°C when tested as specified in 4.3.

3.6 Chemical requirements.- The leather shall have a minimum (pH) value of 3.3 when tested as specified in 4.3.

3.7 Workmanship.- The finished leather shall conform to the quality and grade of product established by this specification. 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 supplier is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified, the supplier may utilize his own facilities or any commercial laboratory acceptable to 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 Inspection.- Sampling for inspection shall be performed in accordance with KK-L-311 except when otherwise indicated hereinafter.

4.2.1 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 purchase documents.

4.2.2 Examination of the end item.- The classification of defects found during the examination shall be in accordance with the lists shown in 4.2.2.1 and 4.2.2.2. The sample unit for these examinations shall be one side, back, bend or shoulder. The lot size shall be expressed in terms of one side, back, bend or shoulder.

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4.2.2.1 Examination for visual characteristics.-

<u>Examine</u>	<u>Defect</u>
Trim	Not as specified
Color	Not as specified Not uniform
Finish	Not embossed as specified
Quality of leather	Not clean, stain or other foreign matter Coarse loose fiber on flesh side, boney or loose spongy leather; any cut, brand, hole, hip mark, scratch, heavy vein, deep fat wrinkle and surface imperfections which impairs the cutting value of more than 12 percent of the total area of the leather

4.2.2.2 Examination for dimensional characteristics.-

<u>Examine</u>	<u>Defect</u>
Area (expressed in terms of square feet)	Less than area marked on the leather
Marking	Omitted

4.2.3 Examination of preparation for delivery requirements.- An examination shall be made in accordance with the provisions of MIL-L-43432 to determine that packaging, packing and marking requirements of section 5 of this specification are complied with.

4.3 End item testing.- The methods of testing specified in KK-L-311, wherever applicable and as listed in table I, shall be followed. Sampling procedure and location from which the sample unit is to be obtained shall be in accordance with KK-L-311. All test reports shall contain the individual values utilized in expressing the final results. The lot shall be rejected if any one of the following conditions exists:

- a. More than one failure occurs for thickness.
- b. Any failure occurs for spotting, blistering, tackiness, shrinkage temperature or acidity.

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TABLE I.- Tests

Characteristic	Require- ment para- graph	Test method	Requirement applicable to	
			sample unit	composite
Material identi- fication	3.3	<u>1</u> /	-	-
Tannage	3.4	<u>1</u> /	-	-
Thickness	3.5.2	1011	X	-
Primer coat	3.5.4	<u>1</u> /	-	-
Vinyl resin solution	3.5.4	<u>1</u> /	-	-
Resistance to spotting and blistering	3.5.5	4.4.1	X	-
Tackiness	3.5.6	3111	X	-
Shrinkage tempera- ture	3.5.7	7011	X	-
Acidity (pH)	3.6	6621	-	X

1/ The supplier shall submit a certificate of compliance for this characteristic.

#### 4.4 Tests.-

4.4.1 Resistance to spotting and blistering.- The specimen shall be a 2 by 1 inch rectangle of leather. One drop of water shall be placed on the grain side of the specimen and allowed to air-dry. The specimen shall be examined for spotting, discoloration, and blistering.

#### 5. PREPARATION FOR DELIVERY

5.1 Packaging.- Packaging shall be level A or C as specified (see 6.2).

5.1.1 Levels A and C.- Leather shall be packaged in accordance with the applicable requirements of MIL-L-43432.

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

5.2.1 Levels A, B, and C.- Leather shall be packed in accordance with the applicable requirements of MIL-L-43432.

5.3 Marking.- In addition to any special marking required by the contract or order, shipments shall be marked in accordance with MIL-L-43432.

## 6. NOTES

6.1 Intended use.- The leather covered by this specification is intended for use in making chinstraps and visors for service caps. Type I leather is intended for chinstraps and top visor pieces. Type II and type III leather is intended for bottom visor pieces.

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

- a. Title, number and date of this specification.
- b. Type required (see 2.1).
- c. Thickness required (see 3.5.2).
- d. Selection of applicable levels of packaging and packing (see 5.1 and 5.2).

6.3 Impregnation.- Resin impregnation of type II and type III leather has been found to produce a stiffness which will meet the end item stiffness requirements for fabricated visors.

6.4 For access to samples, address the procuring office issuing the invitation for bids.

### Custodians:

Army - GL  
Air Force - 11

### Preparing activity:

Army - GL  
Project No. 8330-0086

### Review activities:

Army - MD  
Air Force - 82, 85

Review information is current as of the date of this document. For future coordination of changes to this document, draft circulation should be based on the information in the current Federal Supply Classification Listing of DOD Documents.

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<b>SPECIFICATION ANALYSIS SHEET</b>		Form Approved Budget Bureau No. 22-R255
<b>INSTRUCTIONS:</b> This sheet is to be filled out by personnel, either Government or contractor, involved in the use of the specification in procurement of products for ultimate use by the Department of Defense. This sheet is provided for obtaining information on the use of this specification which will insure that suitable products can be procured with a minimum amount of delay and at the least cost. Comments and the return of this form will be appreciated. Fold on lines on reverse side, staple in corner, and send to preparing activity. Comments and suggestions submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or serve to amend contractual requirements.		
<b>SPECIFICATION</b> Leather, Cattlehide, For Visions and Chinstraps      MIL-L-43541		
<b>ORGANIZATION</b>		
<b>CITY AND STATE</b>	<b>CONTRACT NUMBER</b>	
<b>MATERIAL PROCURED UNDER A</b> <input type="checkbox"/> DIRECT GOVERNMENT CONTRACT <input type="checkbox"/> SUBCONTRACT		
<b>1. HAS ANY PART OF THE SPECIFICATION CREATED PROBLEMS OR REQUIRED INTERPRETATION IN PROCUREMENT USE?</b> A. GIVE PARAGRAPH NUMBER AND WORDING.		
B. RECOMMENDATIONS FOR CORRECTING THE DEFICIENCIES		
<b>2. COMMENTS ON ANY SPECIFICATION REQUIREMENT CONSIDERED TOO RIGID</b>		
<b>3. IS THE SPECIFICATION RESTRICTIVE?</b> <input type="checkbox"/> YES <input type="checkbox"/> NO (If "yes", in what way?)		
<b>4. REMARKS</b> (Attach any pertinent data which may be of use in improving this specification. If there are additional papers, attach to form and place both in an envelope addressed to preparing activity)		
<b>SUBMITTED BY</b> (Printed or typed name and activity - Optional)		<b>DATE</b>

DD FORM 1426  
1 JAN 66

REPLACES EDITION OF 1 OCT 64 WHICH MAY BE USED.