

KK-L-271H  
March 9, 1976  

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SUPERSEDING  
Fed. Spec. KK-L-271G  
February 9, 1968

## FEDERAL SPECIFICATION

### LEATHER, CATTLEHIDE, STRAP, VEGETABLE TANNED

This specification was approved by the Commissioner, Federal Supply Service, General Services Administration, for the use of all Federal agencies.

#### 1. SCOPE AND CLASSIFICATION

1.1 Scope. This specification covers the requirement for vegetable tanned cattlehide strap leather (see 6.1).

1.2 Classification. The strap leather shall be furnished in the following types and classes, as specified (see 6.2):

Type I	- Sides
Type II	- Backs
Type III	- Bends
Type IV	- Double shoulders
Class 1	- Mildew resistant treated
Class 2	- Untreated

#### 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:

##### Federal Standards:

FED-STD-123	- Marking for Shipment (Civil Agencies).
FED-STD-311	- Leather, Methods of Sampling and Testing

(Activities outside the Federal Government may obtain copies of Federal Specifications, Standards, and Handbooks as outlined under General Information in the Index of Federal Specifications and Standards and at the prices indicated in the Index. The Index, which includes cumulative monthly supplements as issued, is for sale on a subscription basis by the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

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(Single copies of this specification and other Federal specifications required by activities outside the Federal Government for bidding purposes are available without charge from Business Service Centers at the General Services Administration Regional Offices in Boston, New York, Washington, DC, Atlanta, Chicago, Kansas City, MO, Fort Worth, Denver, San Francisco, Los Angeles, and Seattle, WA.

(Federal Government activities may obtain copies of Federal Specifications, Standards, and Handbooks and the Index of Federal Specifications and Standards from established distribution points in their agencies.)

**Military Specification:**

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

(Copies of Military Specifications and Standards 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 Material.** The strap leather shall be full grain or corrected grain cattlehide. Corrected grain leather shall be buffed or snuffed only to the extent necessary to remove superficial blemishes.

**3.2 Tannage.** The leather shall be vegetable tanned.

**3.3 Physical requirements.**

**3.3.1 Trim (form and area).** The leather shall be furnished in the form of sides, backs, bends or double shoulders as required for the type specified (see 1.2). The leather shall be trimmed to conform with the applicable definition as listed under "Definition of Terms" in FED-STD-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 double shoulders shall be marked on the flesh side in the right hand corner formed by the straight edge cut and the belly cut.

**3.3.2 Thickness.** The thickness of the leather shall be as specified (see 6.2). A tolerance of  $\pm 1/2$  ounce shall be permitted. (Note: 1 ounce =  $1/64$  inch).

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3.3.3 Color and finish. The color and finish shall be as specified (see 6.2 and 6.3).

3.3.4 Colorfastness (resistance to rubbing). The leather shall be tested in accordance with 4.3 for resistance to wet and dry crocking. Unless otherwise specified (see 6.2), staining of the dry cloth shall be not lower than Munsell value 8.5 and staining of the wet cloth shall be not lower than Munsell value 8.0.

3.3.5 Cracking. The leather shall not crack when tested as specified in 4.3.

3.3.6 Breaking force. At least 80 percent of the specimens tested shall meet the minimum breaking force values shown in table I when tested as specified in 4.3.

TABLE I. Breaking force

Thickness (ounces)	Breaking force (pounds), minimum
2 to 3-1/2	30.0
3-3/4 to 5-1/2	65.0
5-3/4 and up	110.0

3.3.7 Elongation. At least 80 percent of the specimens tested shall have elongation values no greater than 20.0 percent at the loads indicated in table II when tested as specified in 4.3.

TABLE II. Elongation load

Thickness (ounces)	Load (pounds)
2 to 3-1/2	20.0
3-3/4 to 5-1/2	45.0
5-3/4 and up	70.0

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**3.4 Chemical requirements.**

3.4.1 The leather shall conform to the chemical requirements of table III when tested as specified in 4.3.

TABLE III. Chemical requirements

Characteristic	Minimum	Maximum
Chloroform-soluble material, percent <u>1/</u>	9.0	15.0
Water-soluble material, percent <u>1/</u>	---	18.0
Total ash, percent <u>1/</u>	---	5.0
Acidity (pH)	3.3	5.0
Lead, qualitative	<u>2/</u>	<u>2/</u>

1/ Moisture free basis.

2/ The leather shall be free of lead.

3.4.2 Class 1. When class 1 is specified (see 6.3), the leather shall contain not less than 0.18 percent nor more than 0.70 percent parantrophanol fungicide when tested as specified in 4.3.

3.5 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 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 in the contract or order, the supplier 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 specification where such inspections are deemed necessary to assure supplies and services conform to specified requirements.

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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 Quality conformance inspection. Sampling for inspection shall be performed in accordance with FED-STD-311 except when otherwise indicated hereinafter.

4.2.1 Component and material inspection. In accordance with 4.1 above, components and materials shall be inspected 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 document.

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 double shoulder. The lot size shall be expressed in terms of one side, back, bend, or double shoulder. A sample size of 15 and a rejection number of 2 shall be applicable for thickness determinations on lots consisting of 51 or more units of product. Separate examinations shall be performed for visual and dimensional characteristics, but the same sample may be used for each examination.

4.2.2.1 Examination for visual characteristics.

<u>Examine</u>	<u>Defect</u>
Quality of leather	Burn mark on flesh side Flesh side not smooth or has areas of loose flesh in excess of four square inches in total area Stain, discoloration, cut scratch, hole, brand, hipmark, rough shoulder, heavy vein, deep fat wrinkle, boney or flanky areas and surface imperfections which impair the cutting value of more than 12 percent of the total area of the leather

NOTE: Light, well healed scratches and grub holes, light fat wrinkles, and slight stains shall not be classified as defects.

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4.2.2.2 Examination for dimensional characteristics.

<u>Examine</u>	<u>Defect</u>
Area (expressed in terms of square feet)	Not as marked on leather
Marking	Omitted
Thickness <u>1/</u>	Not as specified

1/ Thickness shall be measured in accordance with method 1011 of FED-STD-311.

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 comply with the section 5 requirements.

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

- a. More than three test failures occur for breaking force or elongation
- b. More than one test failure occurs for the remaining requirements applicable to the sample unit
- c. Any composite fails to meet the specified requirement

TABLE IV. Tests

Characteristic	Requirement paragraph	Test method	Requirement applicable to	
			Sample unit	Composite sample
Material identification	3.1	<u>1/</u>	-	-
Tannage	3.2	<u>1/</u>	-	-

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TABLE IV. Tests (cont'd)

Characteristic	Requirement paragraph	Test method	Requirement applicable to	
			Sample unit	Composite sample
Colorfastness (resistance to rubbing)	3.3.4	3031	X	-
Cracking	3.3.5	4.3.1	X	-
Breaking force	3.3.6	2021	X	-
Elongation	3.3.7	2021	X	-
Chloroform-soluble material	3.4.1	6341	-	X
Water-soluble material	3.4.1	6341	-	X
Total ash	3.4.1	6421	-	X
Acidity (pH)	3.4.1	6621	-	X
Lead (qualitative)	3.4.1	6551	-	X
Paranitrophenol	3.4.2	6711	-	X

1/ Unless otherwise specified, a certificate of compliance is required and will be acceptable for the stated requirement.

4.3.1 Cracking. The leather shall be tested for cracking in accordance with method 4011 of FED-STD-311. The diameters of the mandrels for the indicated thickness shall be as follows:

<u>Thickness of leather (ounces)</u>	<u>Diameter of mandrel (inches)</u>
2 to 5-1/2	1/4
5-3/4 to 9-1/2	3/8
9-3/4 and over	1/2

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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.

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. Marking shall be in accordance with 5.3.1 or 5.3.2, as specified (see 6.2).

5.3.1 Civil agencies. In addition to any special marking required by the contract or order, interior packages and shipping containers shall be marked in accordance with FED-STD-123.

5.3.2 Military requirements. In addition to any special marking required by the contract or order, interior packages and shipping containers shall be marked in accordance with MIL-L-43432.

6. NOTES

6.1 Intended use. The strap leather covered by this specification is intended primarily for use in post office mail bags, cases, belts, holsters, shoulder straps, and cap visors.

6.2 Ordering data. Purchasers should select the preferred options permitted herein and include the following information in procurement documents:

- (a) Title, number, and date of this specification.
- (b) Type and class required (see 1.2).
- (c) Thickness required (see 3.3.2).
- (d) Color and finish required (see 3.3.3).
- (e) Colorfastness values when other than specified values are required (see 3.3.4).
- (f) Selection of the applicable levels of packaging and packing (see 5.1 and 5.2).
- (g) Marking required (see 5.3).

6.3 Lead chromate, lead pigments, or other lead salts should not be used in the finish.



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Custodians:

Army - GL  
Air Force - 92

Review activities:

Army - MD, ME, AT  
DSA - CT

User activity:

Army - EL

Preparing activity:

Army - GL

Civil Agency Coordinating Activities:

AGR  
DC-DCG  
GSA - FSS  
PO  
TR  
VA - DMS

Project No. 8330-0138

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