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~~SUPERSEDING~~
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August 31, 1965

FEDERAL SPECIFICATION
LEATHER, CATTLEHIDE, UPHOLSTERY

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 requirements for cattlehide leather in the form of whole hides.

1.2 Classification.

1.2.1 Types and finishes. The leather shall be furnished in the following types and finishes as specified (see 6.2).

Type I - Full Grain.

Type II - Hand buff.

Type III - Machine buff.

Type IV - Deep buff.

Finish a - Smooth grain.

Finish b - Boarded (hand or machine).

Finish c - Embossed in fine grain.

Finish d - Embossed in coarse grain.

Finish e - Equal to an approved sample.

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. No. 123 - Marking for Domestic Shipment (Civilian Agencies).

Fed. Test Method Std. No. 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, D.C. 20402.

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

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(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.

Military Standard:

MIL-STD-129 - Marking for Shipment and Storage.

(Copies of Military Specifications and Standards required by contractors 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 material shall be cattleshide leather. The flesh side shall be smooth and free from loose flesh.

3.2 Tannage. The leather shall be tanned by a vegetable, mineral, or synthetic tanning process, or suitable combinations of such processes.

3.3 Types.

3.3.1 Type I, full grain. The leather shall be a hide from which nothing except the hair and scud has been removed from the grain side. Superficial scars, scratches, and other grain defacements may be lightly buffed by hand, but not by machine. The total area so affected shall be not more than 5 percent of the total area of the hide.

3.3.2 Type II, hand buff. The leather shall be a full grain hide except that the entire grain area may be snuffed, but not to more than the depth required to remove only the top portions of the hair follicles.

3.3.3 Type III, machine buff. The leather shall be a hide from which a cutting of not more than one ounce in thickness has been removed from the grain layer, leaving distinct characteristics of the grain pattern on the entire underlying surface.

3.3.4 Type IV, deep buff. The leather shall be a hide from which not more than the grain layer has been removed, leaving no characteristics of the grain pattern on any part of the underlying surface.

3.4 Physical requirements.

3.4.1 Trim (form and area). The leather shall be whole hides, evenly trimmed, with the head cut off behind the natural openings, the shanks cut off above the knees, and the tail not more than 2 inches long. Unless otherwise specified (see 6.2 and 6.4) the minimum area of each hide shall be 36 square feet. The maximum area of each hide shall be 55 square feet. The area, expressed in terms of square feet, shall be legibly marked in the butt area on the flesh side of each hide.

3.4.2 Thickness. Unless otherwise specified (see 6.2), the leather shall be $3 \pm 1/2$ ounces in thickness. The flesh side may be buffed, shaved or skived to produce a uniform thickness. Note: 1 ounce = $1/64$ inch.

3.4.3 Color. The color of the finished leather shall be as specified (see 6.2 and 6.3). For types I and II leather, the color (dye) shall penetrate not less than the full depth of the grain leather. For types III and IV leather, the color (dye) shall penetrate the grain side of the leather to a depth of not less than two ounces.

3.4.4 Finish. The grain surface of the leather shall be smooth, boarded, or embossed as required for the finish specified (see 6.2). The finish coat shall be a suitable material that is securely anchored to the grain surface of the leather. When finish "e" is specified, the finish of the grain surface shall be equal to an approved sample (see 6.3).

3.4.5 Cracking, low temperature. The leather shall not crack when tested as specified in 4.3.

3.4.6 Colorfastness. The leather shall have fair resistance to crocking when tested as specified in 4.3.

3.4.7 Tackiness. The leather shall show no tendency toward tackiness when tested as specified in 4.3.

3.4.8 Breaking force and elongation. Not less than 80 percent of the specimens tested shall conform to the requirements indicated in table I when tested as specified in 4.3.

TABLE I. Breaking force and elongation

Type	Breaking force ^{1/} pounds (minimum)	Elongation ^{1/} percent (maximum)	Elongation load (pounds)
I and II	90.0	25.0	50.0
III and IV	135.0	25.0	100.0

^{1/} Not applicable to leather less than 2-1/2 ounces in thickness.

3.5 Chemical requirements.

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

TABLE II. Chemical requirements

Characteristics	Minimum	Maximum
Chloroform-soluble material (percent) ^{1/}	8.0	20.0
pH value	8.3	5.0

^{1/} Calculated on a moisture free basis.

3.6 Workmanship. The leather shall conform to the quality and grade of product established by this specification. The 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 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 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 that 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 Fed. Test Method Std. No. 311, except when otherwise indicated hereinafter.

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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 document.

4.2.2 Examination of the end item. The classification of defects found during examinations of the leather shall be in accordance with 4.2.2.1 and 4.2.2.2. The sample unit for these examinations shall be one whole hide. The lot size shall be expressed in units of one whole hide. Sampling for these examinations shall be performed in accordance with Fed. Test Method Std. No. 311 except that a sample size of 15 and a rejection number of 2 shall be applicable for thickness determinations on lots consisting of 91 or more hides. Separate examinations shall be performed for visual and dimensional examinations, but the same sample may be used for each examination.

4.2.2.1 Examination for visual characteristics.

Examine	Defect
Material	Not cattlehide.
Type	Not as specified.
Trim	Not whole hide with head removed. Not evenly trimmed. Shanks not cut off above the knees.
Color Types I and II Types III and IV	Not as specified. Dye does not completely penetrate leather. Dye penetrates grain side to a depth of less than two ounces.
Finish	Grain surface not smooth, not boarded, not embossed as required or not equal to approved sample for the finish specified. Grain side does not have finish coat.
Quality of leather	Stain or foreign matter. Flesh side not free of loose flesh or not smooth. Cut, scratch, hole, band, broken grain, hip mark, vein, wrinkle, rough shoulder, or other imperfection that individually or collectively cause more than a 6 percent loss in the total area of the hide.

4.2.2.2 Examination for dimensional characteristics.

Examine	Defect
Area (expressed in terms of square feet)	Area (square feet) not as marked on hide. Unless otherwise specified (see 3.4.1), area less than 36 square feet. Area greater than 55 square feet.
Marking	Omitted, illegible, or not in area specified.
Thickness ^{1/}	Not as specified.

^{1/} Thickness shall be determined in accordance with method 1011 of Fed. Test Method Std. No. 311. No individual thickness value shall be less than the minimum or greater than the maximum specified.

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 whether packaging, packing and marking requirements comply with section 5 of this specification.

4.3 End item testing. The methods of testing specified in Fed. Test Method Std. No. 311, wherever applicable and as listed in table III, shall be followed. Sampling procedure and location from which the sample unit is to be obtained shall be in accordance with Fed. Test Method Std. No. 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 exist:

- 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 test result fails to meet the specified requirement.

TABLE III. End item testing

Characteristic	Requirement paragraph	Test method	Requirement applicable to:	
			Sample unit	Composite
Material	3.1	1/ 1/	-	-
Tannage	3.2	1/ 1/	-	-
Cracking, low temperature	3.4.5	4.3.1	X	-
Colorfastness	3.4.6	3031	X	-
Tackiness	3.4.7	3111	X	-
Breaking force	3.4.8	2031	X	-
Elongation	3.4.8	2031	X	-
Chloroform-soluble material	3.5.1	6341	-	X
pH value	3.5.1	6621	-	X

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

4.3.1 Cracking, low temperature. The leather shall be tested for resistance to cracking in accordance with method 7211 of Fed. Test Method Std. No. 311 except that the specimen shall be a 4 by 1 inch rectangle of leather and shall be folded twice upon itself in accordance with the following procedure: The specimen shall be folded upon itself along the length dimension with the flesh side in and then folded at right angles to the original fold.

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.

5.3.1 Civil requirements. 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. No. 123.

5.3.2 Military requirements. In addition to any special marking required by the contract or order, shipping containers shall be marked in accordance with MIL-STD-129.

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6. NOTES

6.1 Intended use. The leather is primarily intended for use in upholstering furniture and motor vehicle seats.

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 finish required (see 1.2.1).
- (c) Minimum area when 36 square feet is not sufficient (see 3.4.1 and 6.4).
- (d) Thickness required (see 3.4.2).
- (e) Color required (see 3.4.3).
- (f) Selection of the applicable levels of packaging and packing (see 5.1 and 5.2).

6.3 For access to samples, address the procuring agency issuing the invitation for bids.

6.4 Area. When the minimum area of 36 square feet is not sufficient to accommodate the dimensions of the components to be obtained from the leather, an appropriate minimum area should be specified for the leather (see 3.4.1).

MILITARY CUSTODIANS:

Army - GL
Navy - YD
Air Force - 11

Review activities:

Army - MD
Navy - YD, MC
Air Force - 11, 45, 82

User activities:

Army - EL
Navy - SH

Preparing activity:

Army - GL

CIVIL AGENCIES INTEREST:

AGR
COM-NBS
DC
GSA-FSS
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VA
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SPECIFICATION ANALYSIS SHEET		Form Approved Budget Bureau No. 22-R255
<p>INSTRUCTIONS: 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.</p>		
SPECIFICATION Leather, Cattlehide, Upholstery		KK-L-291G
ORGANIZATION		
CITY AND STATE		CONTRACT NUMBER
MATERIAL PROCURED UNDER A <input type="checkbox"/> DIRECT GOVERNMENT CONTRACT <input type="checkbox"/> SUBCONTRACT		
1. HAS ANY PART OF THE SPECIFICATION CREATED PROBLEMS OR REQUIRED INTERPRETATION IN PROCUREMENT USE? A. GIVE PARAGRAPH NUMBER AND WORDING.		
B. RECOMMENDATIONS FOR CORRECTING THE DEFICIENCIES		
2. COMMENTS ON ANY SPECIFICATION REQUIREMENT CONSIDERED TOO RIGID		
3. IS THE SPECIFICATION RESTRICTIVE? <input type="checkbox"/> YES <input type="checkbox"/> NO (If "yes", in what way?)		
4. REMARKS (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)		
SUBMITTED BY (Printed or typed name and activity - Optional)		DATE

DD FORM 1426
1 JAN 66

REPLACES EDITION OF 1 OCT 64 WHICH MAY BE USED.