

INCH-POUND

MIL-L-20271D(MC)

28 March 1994
MIL-L-20271D(MC)
28 January 1983

MILITARY SPECIFICATION

LACE, GOLD: ORNAMENTAL

This specification is approved for use by the U. S. Marine Corps, Department of the Navy, and is available for use by all Departments and Agencies of the Department of Defense.

1. SCOPE

1.1 Scope. This specification covers requirements for synthetic, tarnish-resistant gold lace with an interwoven scarlet center stripe.

1.2 Classification. The lace shall be of one type in the following classes, as specified (see 6.2).

- Class 1 - 3/8 inch wide
- Class 2 - 5/8 inch wide
- Class 3 - 1-1/4 inch wide
- Class 4 - 1-1/2 inch wide

2. APPLICABLE DOCUMENTS.

2.1 Issues of documents. The following documents of the issue in effect on dates of invitation for bids or request for proposal, form a part of the 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 the Commander (PSE-C), Marine Corps Systems Command, Quantico, VA 22134-5010 by using the self addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC N/A

FSC 8315

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SPECIFICATIONS

FEDERAL

UU-P-553	- Paper, Wrapping, Tissue
PPP-B-636	- Box, Shipping, Fiberboard
PPP-T-60	- Tape, Packaging, Waterproof
QQ-A-1876	- Aluminum Foil

MILITARY

MIL-E-17568	- Embroidery Materials, Metallic and Synthetic Metallic
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STANDARDS

FEDERAL

FED-STD-191	- Textile Test Methods
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MILITARY

MIL-STD-105	- Sampling Procedures and Tables for Inspection by Attributes
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MIL-STD-129	- Marking for Shipment and Storage
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(Copies of 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.)

2.2 Other publications. The following document(s) form a part of this specification to the extent specified herein. The issues of the documents which are indicated as DoD adopted shall be the issue listed in the current DODISS and the supplement thereto, if applicable.

DoD Standard Shades for Heraldic Yarns 1974

(Application for copies should be addressed to The Color Association of the United States, Inc., 200 Madison Avenue, New York, New York 10016.)

2.3 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.

3. REQUIREMENTS

3.1 Guide sample. Guide samples are furnished solely for guidance and information to the contractor (see 6.2). Variation from this specification may appear in the sample, in which case the specification shall govern.

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3.2 First article. When specified (see 6.2), the contractor shall furnish sample unit(s) for first article inspection and approval (see 4.4 and 6.4).

3.3. Materials.

3.3.1 Gold synthetic metallic yarn. The gold synthetic metallic embroidery material shall conform to type III, class 8 or class 11 of MIL-E-17568. The core yarn may be silk, nylon, or mercerized cotton and shall be gold shade, Cable No. 67104. (See DoD Standard Shades for Heraldic Yarns - 1974).

3.3.2 Center stripe. The scarlet center stripe of lace shall be interwoven (warpwise direction) with silk thread. The color of thread shall match scarlet shade, W, Cable No. 67111 (See DoD Standard Shades for Heraldic Yarns - 1974).

3.3.3 Colorfastness. The combined core yarn and synthetic metallic ribbon shall show good colorfastness to dry cleaning, dry and wet heat, cracking, perspiration, bleaching, light and weathering when tested as specified in Section 4, Table II.

3.3.4 Labile sulfur content. The use of dyes and compounds containing elementary sulfur capable of oxidation to sulfuric acid is prohibited. The dyestuff shall be chosen and applied so that the dyed and finished thread shall contain no more labile sulfur than shown by the standard sample when tested as specified in Section 4, Table II. When a standard sample is not available, the dyed and finished thread shall show no more than a slight trace of labile sulfur as defined in the test method specified in Section 4, Table II.

3.4 Design and construction. The lace shall be designed and constructed so as to conform to the physical requirements listed in Table I.

Table I - Physical Requirements

Class	Width inches (min)	Fancy weave pattern, 5 per inch	Picks per inch (min)	Ribs per inch (min)	Pattern width (inch)		
					Gold	Center Stripe	Gold
1	3/8	5	260	35	11/64	1/32	11/64
2	5/8	5	260	35	9/32	1/16	9/32
3	1-1/4	5	260	21	16/32	1/4	16/32
4	1-1/2	5	260	21	21/32	3/16	21/32

3.5 Length of rolls. Unless otherwise specified (see 6.2), the lace shall be put on rolls of not less than 25 continuous yards nor more than 35 yard total. One splice per roll shall be allowed, but no spliced piece shall be less than 5 yards in length. The lace shall be wound on suitable cores of the same width as the lace. the ends of the rolls shall be securely fastened with gummed tape to prevent slippage and unrolling of the roll.

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3.6 Identification. Each roll shall have an identification ticket attached. The ticket shall be light in color to permit easy reading of printed, stamped or typed markings. The use of handwritten entries is prohibited. The following information shall be legibly printed on the ticket with water insoluble ink:

Nomenclature
Specification Number
Yardage
Contract
Number and Date
Supplier's Name
Name of Contracting Agency

3.7 Workmanship. The finished lace shall conform to the quality of product established by this specification. The occurrence of defects shall not exceed the limits set by the applicable acceptable quality levels (AQL).

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract, the contractor is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract, 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 inspections set forth in the specification where inspection are deemed necessary to assure supplies and services conform to prescribed requirements.

4.2 Classification of inspection. The inspection requirements specified herein are classified as follows:

1. First article inspection (see 4.4).
2. Quality conformance inspection (see 4.5).

4.3 Inspection conditions. All inspections shall be in accordance with test conditions specified in MIL-STD-105, except where otherwise indicated herein.

4.4 First article inspection. When first article is required, inspection shall be made of completely fabricated lace for all provisions of this specification.

Table II - Component Testing

Component and Lot Expressed in Terms of Characteristics	Rqmt Para	Test Method	Rqmt Appl to Lot		No. Determinations per Sample Unit	Sample Unit	Results Reported as:
			Unit	Avg			
Threads: (1 yard)	3.3.1	1110, 1200	X		1	1/	Silk, Nylon, Cotton
	3.3.2	or 1530					Pass or Fail
Ply	3.3.1	Visual	X		1		
Color	3.3.2						
Colorfastness: Light	3.3.2.1	5660 2/	X		1		Excellent, Good, Fair, or Poor
Wet (Dry) Cleaning	3.3.2.1	5622	X		1		Excellent, Good, Fair, or Poor
Labile Sulfur	3.3.2.2	2020	X		1		Pass or Fail

! Cone or spool or sufficient number of bobbins to total a minimum of 360 yards of each thread used (in which form purchased).

! The test specimens shall be exposed for a minimum of 40 standard facing hours except no appreciable change in color shall be evident before the first 20 hours. After the first 20 hours, an appreciable change in shade only shall be permitted.

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4.5 Quality conformance inspection.

4.5.1 Testing of components. Testing of components shall be in accordance with the applicable subsidiary specifications and standards to the extent applicable, except that this specification shall govern in the event of conflict. The method of testing listed in Table II shall be as specified in FED-STD-191, wherever applicable.

4.5.2 Inspection of the end item. The end item shall be examined for defects listed in 4.5.2.1. The defects listed shall be counted regardless of their proximity to one another, except where two or more defects represent a single local condition of the lace, in which case only the more serious defects shall be counted as one defect for each warpwise yard or fraction thereof in which it occurs. The unit of product for this examination shall be 1 yard of each class. The AQL for this examination shall be as noted in the contract or purchase order. The number of rolls to be examined shall be selected as follows:

<u>Lot in size in yards</u>	<u>Sample size in rolls</u>
Up to 3,200	10
3,201 to 10,000	15
10,001 to 35,000	25
35,001 and over	35

4.5.2.1 General defects. General defects shall be as follows:

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Examine	Defects	Classification	
		Major	Minor
General (when applicable)	a. Abrasion mark	101	
	b. Any cut, hole, or tear	102	
	c. Any delamination or separation of film	103	
	d. Broken or missing yarn	104	
	e. Uneven tension, resulting in thick and thin places	105	
	f. Tight or loose yarn, causing distortion or loopiness	106	
	g. Broken or missing end or pick	107	
	h. Tight picks		201
	i. Course or heavy picks		203
	j. Fine or light picks		204
	k. Knots, slubs		205
			206
Cleanness Color	a. Any spot or stain		
	b. Not as specified	108	
	c. Variation of shade in same roll		207
Design	a. Not as specified	109	
	b. Width less than specified, including color pattern stripes	110	
Construction	a. Selvages curled, folded or rolled	111	
	b. More than one splice		208

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4.5.2.2 Examination for length.

4.5.2.2.1 Individual pieces. The pieces shall be examined for gross length. Any gross length found to be less than the specified minimum length or any gross length found to be more than 1 yard below the gross length marked on the piece ticket or any spliced piece less than 5 yards long shall be considered a defect with respect to length. The unit of product for this examination shall be one roll. The sample size shall be expressed in units of one roll. The inspection level shall be as noted in the contract or purchase order.

4.5.2.2.2 Total yardage in sample. The lot sample shall be unacceptable if the total of the actual gross length of pieces in the sample is less than the total of the gross lengths marked on the piece tickets.

4.5.3 Testing of the end item. Testing of the completely fabricated lace shall be performed in accordance with Table III for the characteristics shown herein. The sample unit shall be 3 continuous yards. The lot size shall be expressed in units of 1 yard. The inspection level shall be as noted in the contract or purchase order. The requirements are applicable to the individual unit.

Table III - End Item Testing

Characteristic	Rqmt Para	Test Method	Determinations Per Sample Unit	Results Report as:
Fancy Weave Pattern	Table I	Visual	1	Pass or Fail
Picks per Inch	Table I	Visual	5	Average to nearest Number
Ribs per Inch	Table I	Visual	1	To nearest No.
Width or Pattern	Table I	Standard Commercial	(For each Stripe)	To nearest 1/64 inch

4.5.4 Examination of packaging requirements. An examination shall be made to determine that the packaging, packing, and marking complies with Section 5 requirements. Defects shall be scored in accordance with the list below. The sample unit shall be one shipping container fully prepared for delivery, except that it need not be closed. Defects of closure listed below shall be examined on shipping containers fully prepared for delivery. The lot size shall be the number of shipping containers in the end item inspection lot. The inspection level shall be as noted in the contract or purchase order.

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<u>Examine</u> Marking (exterior and interior)	<u>Defect</u> Omitted, incorrect, illegible, of improper size, location, sequence or method of application.
Materials	Any component missing; or component damaged affecting serviceability.
Workmanship	Inadequate application of components, such as incomplete closure of container flaps, loose strapping, inadequate stapling. Bulging or distortion of containers.
Weight	Weight of box and contents exceeds requirements.

5. PACKAGING

5.1 Preservation. Preservation shall be level A or commercial as specified (see 6.2).

5.1.1 Level A. Each roll of the gold lace shall be completely wrapped with two thicknesses (or sheets) of antitarnish tissue paper conforming to type II, class 1 or class 2 of UU-P-553. The ends of wrap shall be folded back to prevent unwrapping. Each wrapped roll shall be completely overwrapped with a sheet of aluminum foil, 0.0015 inch in caliper, conforming to QQ-A-1876. Each roll shall be secured by cross-tying with a string. Each roll shall then be packaged in a snug-fitting two-piece full telescope style, folding or set-up box. Any grade or finish of boxboard sufficiently strong to prevent crushing of the item may be used for the box. Each box shall be secured with gummed paper tape (1 inch minimum width).

5.1.2 Commercial. Gold lace shall be preserved in accordance with ASTM D 3951.

5.2 Packing. Packing shall be level A, or commercial as specified (see 6.2).

5.2.1 Level A. Gold lace, of one class only, packaged as specified in 5.1.1, shall be packed in a shipping container conforming to style RSC, class weather-resistant, grade V3C or V3S of PPP-B-636. The maximum weight of box and contents shall not exceed 65 pounds. Exact dimensions of the container shall be determined by the supplier in order to insure that the contents fit snugly. Each shipping container shall be closed and reinforced with flat steel strapping or tape banding in accordance with the appendix of the box specification. In addition, shipping containers shall have the seams, corners and manufacturer's joints sealed by the application of 3 inch minimum width olive drab cloth tape conforming to class 1 of PPP-T-60.

5.2.2 Commercial. Gold lace preserved as specified in 5.1 shall be packaged in accordance with ASTM D 3951.

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5.3 Marking. In addition to any special marking required by the contract or purchase order, unit packages and shipping containers shall be marked in accordance with the requirements of MIL-STD-129.

6. NOTES

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory).

6.1 Intended use. The gold lace covered by this specification is intended to be used on clothing and accessory items as follows:

- Class 1 - Chin strap for Women Marine dress caps.
- Class 2 - Chin strap for Male Marine dress caps.
- Class 3 - Evening dress trousers.
- Class 4 - Full dress belt for Director and Assistant Director,
U. S. Marine Corps Band

6.2 Ordering data. Purchasers should exercise any desired options offered herein, and procurement documents should specify the following:

6.2.1 Procurement requirements.

- (a) Title, number and date of this specification.
- (b) Class required (1.2).
- (c) Whether first article is required (3.2).
- (d) Length required (3.5).
- (e) Selection of applicable levels of packaging and packing
(5.1 and 5.2).

6.3 Samples. For information regarding the availability of samples of the lace, address inquiry to procuring activity issuing the invitation for bids.

6.4 First article. Examinations, test and approval shall be as specified by the contracting officer (see 3.2).

6.5 Subject term (key word) listing.

Chin Straps
Lace
Trousers

Preparing Activity
Navy - MC
Project No. 8315-N376

STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

INSTRUCTIONS

1. The preparing activity must complete blocks 1, 2, 3, and 8. In block 1, both the document number and revision letter should be given.
2. The submitter of this form must complete blocks 4, 5, 6, and 7.
3. The preparing activity must provide a reply within 30 days from receipt of the form.

NOTE: This form may not be used to request copies of documents, nor to request waivers, or clarification of 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.

1 RECOMMEND A CHANGE:

1. DOCUMENT NUMBER
MIL-L-20271D(MC)

2. DOCUMENT DATE (YYMMDD)
28 March 1994

3. DOCUMENT TITLE

LACE, GOLD: ORNAMENTAL

4. NATURE OF CHANGE (Identify paragraph number and include proposed rewrite, if possible. Attach extra sheets as needed.)

5. REASON FOR RECOMMENDATION

6. SUBMITTER

a. NAME (Last, First, Middle Initial)

b. ORGANIZATION

c. ADDRESS (Include Zip Code)

d. TELEPHONE (Include Area Code)
(1) Commercial
(2) AUTOVON
(if applicable)

7. DATE SUBMITTED
(YYMMDD)

8. PREPARING ACTIVITY

a. NAME

COMMANDER

b. TELEPHONE (Include Area Code)
(1) Commercial

(2) AUTOVON

(912) 439-6560

567-6560

c. ADDRESS (Include Zip Code)

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ALBANY GA 31704-1128

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