

INCH-POUND

MIL-DTL-20271E(MC)  
28 July 1997  
SUPERSEDING  
MIL-L-20271D(MC)  
28 March 1994

## DETAIL SPECIFICATION

## LACE, GOLD - ORNAMENTAL

This specification is approved for use by 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 will 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

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-D), Marine Corps Systems Command, Quantico, VA 22134-5010 by using the Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC N/A

FSC 8315

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

MIL-DTL-20271E(MC)

## 2. APPLICABLE DOCUMENTS

2.1. General. The documents listed in this section are specified in sections 3 and 4 of this specification. This section does not include documents cited in other sections of this specification or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements documents cited in sections 3 and 4 of this specification, whether or not they are listed.

### 2.2. Government documents.

2.2.1 Specifications, standards, and handbooks. The following specifications, standards, and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those listed in the issue of the Department of Defense Index of Specifications and Standards (DoDISS) and supplement thereto, cited in the solicitation (see 6.2).

## SPECIFICATIONS

### DEPARTMENT OF DEFENSE

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

## STANDARDS

### FEDERAL

FED-STD-191 - Textile Test Methods

(Unless otherwise indicated, copies of the above specifications, standards, handbooks are available from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.)

2.3. Non-Government publications. The following document(s) form a part of this document to the extent specified herein. Unless otherwise specified, the issues of the documents which are DoD adopted are those listed in the issue of the DoDISS cited in the solicitation. Unless otherwise specified, the issues of documents not listed in the DoDISS are the issues of the documents cited in the solicitation (see 6.2).

MIL-DTL-20271E(MC)

ANSI/ASQC Z1.4 - Sampling Procedures and Tables for  
Inspection by Attributes

(Application for copies should be addressed to The American National Standards Institute, 11 West 42nd Street, New York, NY 10036)

Department of Defense (DoD) Standard Shades  
for Heraldic Yarns 1993

(Application for copies should be addressed to The Color Association of the United States, Inc., 409 W. 44 Street, New York, New York 10016-0927.)

2.4. Order of precedence. In the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

3.1. Standard sample. Standard 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.

3.2. First article. When specified (see 6.2), a sample shall be subjected to first article inspection in accordance with 4.3.

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 1993).

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 1993).

3.3.3 Colorfastness. The combined core yarn and synthetic metallic ribbon shall show good colorfastness to dry cleaning,

MIL-DTL-20271E(MC)

dry and wet heat, cracking, perspiration, bleaching, light and weathering.

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 a standard sample is not available, the dyed and finished thread shall show no more than a slight trace of labile sulfur.

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 yards total. One splice per roll shall be allowed, but no spliced piece shall be less than five 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.

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:

MIL-DTL-20271E(MC)

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.

3.8. Recycled, recovered, or environmentally preferable materials. Recycled, recovered, or environmentally preferable materials should be used to the maximum extent possible provided that the material meets or exceeds the operational and maintenance requirements, and promotes economically advantageous life cycle costs.

#### 4. VERIFICATION

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

- a. First article inspection (see 4.3).
- b. Conformance inspection (see 4.4).

4.2. Inspection conditions. Unless otherwise specified, all inspections shall be performed in accordance with the provisions set forth in ANSI/ASQC Z1.4..

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

4.4. Conformance inspection.

4.4.1 Component and material testing. 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.

MIL-DTL-20271E(MC)

TABLE II. Test methods.

Components	Characteristics	Reqmt. para.	Test method	No. det. per S/unit	Results reported as
Threads: (1 yard)	Material identification	3.3.1 3.3.2	1110, 1200 or 1530	1 <u>1</u> /	Silk, nylon, cotton
	Ply color	3.3.1 3.3.2	Visual	1	Pass or fail
	Colorfastness: - light	3.3.2.1	5560 <u>2</u> /	1	Excellent, good, fair, or poor
	Wet (dry) cleaning	3.3.2.1	5622	1	Excellent, good, fair, or poor
	Libile sulfur	3.3.2.2	2020	1	Pass or fail

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

2/ 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.

4.4.2 Examination of the end item. The end item shall be examined for defects listed in 4.4.2.1. 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 one yard of each class. 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

## MIL-DTL-20271E(MC)

4.4.2.1. General defects. General defects shall be as follows:

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.		202
	j. Fine or light picks.		203
	k. Knots, slubs.		204
Cleanness Color	a. Any spot or stain.		205
	b. Not as specified.	108	
	c. Variation of shade in same roll.		206
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.		207

4.4.2.2. Examination for length.

4.4.2.2.1 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 one yard below the gross length marked on the piece ticket or any spliced piece less than five yards long shall be considered a defect with respect to length. The unit of product

MIL-DTL-20271E(MC)

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.

4.4.2.2.2 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 length marked on the piece tickets.

4.4.3 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 three continuous yards. The lot size shall be expressed in units of one 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	Reqmt. para.	Test method	Determinations per sample unit	Results reported as:
Fancy weave pattern	Table I	Visual	1	Pass or fail
Picks per inch	Table I	Visual	5	Average to nearest No.
Ribs per inch	Table I	Visual	1	To nearest No.
Width or pattern	Table I	Std com'l	(For each stripe)	To nearest 1/64 inch

## 5. PACKAGING

5.1. Packaging. For acquisition purposes, the packaging requirements shall be as specified in the contract or order (see 6.2). When actual packaging of material is to be performed by Department of Defense (DoD) personnel, these personnel need to contact the responsible packaging activity to ascertain requisite packaging requirements. Packaging requirements are maintained by the Inventory Control Point's packaging activity within the Military Department of Defense Agency, or within the Military Department's Systems Command. Packaging data retrieval is available from the managing Military Department's or Defense



MIL-DTL-20271E(MC)

Agency's automated packaging files, CD-ROM products, or by contacting the responsible packaging activity.

## 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. Acquisition requirements. Acquisition documents must specify the following:

- a. Title, number, and date of the specification.
- b. Issue of DoDISS to be cited in the solicitation, and if required, the specific issue of individual documents referenced (see 2.2).
- c. Packaging requirements (see 5.1).
- d. Class required (1.2).
- e. Whether first article is required (3.2).
- f. Length required (3.5).

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

6.4. Subject term (keyword) listing.

- Center stripe
- Chin straps
- Trousers

MIL-DTL-20271E(MC)

6.5. Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

Preparing Activity:

Navy - MC

Project No. 8315-N630

## 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.

<b>I RECOMMEND A CHANGE:</b>	1. DOCUMENT NUMBER 20271E(MC)	2. DOCUMENT DATE (YYMMDD) 97 08 11
3. DOCUMENT TITLE <p style="text-align: center;">LACE, GOLD-ORNAMENTAL</p>		
4. NATURE OF CHANGE (Identify paragraph number and include proposed rewrite, if possible. Attach extra sheets as needed.)		
5. REASON FOR RECOMMENDATION		
<b>6. SUBMITTER</b>		
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)
<b>8. PREPARING ACTIVITY</b>		
a. NAME COMMANDER, MARCORSSYSCOM, PSE-D	b. TELEPHONE (include Area Code) (1) Commercial (703) 784 4584 (2) AUTOVON	
c. ADDRESS (Include Zip Code) 2033 BARNETT AVE, SUITE 315 QUANTICO, VA 22134-5010	<b>IF YOU DO NOT RECEIVE A REPLY WITHIN 45 DAYS, CONTACT:</b> Defense Quality and Standardization Office 5203 Leesburg Pike, Suite 1403, Falls Church, VA 22041-3466 Telephone (703) 756-2340 Autovon 288-2340	