

INCH-POUND

MIL-L-3851E
28 March 1991
SUPERSEDING
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MILITARY SPECIFICATION

LOOPS, SLIDE (FOR EQUIPAGE)

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

1. SCOPE AND CLASSIFICATION

1.1 Scope. This specification covers slide loops for equipage items.

1.2 Classification. Slide loops shall be of the following classes, styles, and sizes as specified (see 6.2).

Class 1 - Brass

Style 2 - Rectangular section

Size - 5/8 inch
Size - 1 inch
Size - 1-1/4 inch
Size - 1-1/2 inch
Size - 1-3/4 inch
Size - 2 inch (Construction A)
Size - 2 inch (Construction B)
Size - 2-1/4 inch

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be used in improving this document should be addressed to: U.S. Army Natick Research, Development, and Engineering Center, Natick, MA 01760-5019 by using the Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC N/A

FSC 5340

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

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Class 2 - Malleable Iron

Style 1 - Round section

Size - 2 inch

Style 2 - Rectangular section

- Size - 5/8 inch
- Size - 1 inch
- Size - 1-1/4 inch
- Size - 1-1/2 inch
- Size - 1-3/4 inch
- Size - 2 inch (Construction A)
- Size - 2 inch (Construction B)
- Size - 2-1/4 inch

Class 3 - Steel

Style 2 - Rectangular section

- Size - 5/8 inch
- Size - 3/4 inch (Construction C)
- Size - 1 inch (Construction B)
- Size - 1 inch (Construction C)
- Size - 1-1/4 inch
- Size - 1-1/2 inch
- Size - 1-3/4 inch
- Size - 2 inch (Construction A)
- Size - 2 inch (Construction B)
- Size - 2-1/4 inch

Class 5 - Aluminum

Style 2 - Rectangular section

- Size - 5/8 inch
- Size - 1 inch
- Size - 1-1/4 inch
- Size - 1-1/2 inch
- Size - 1-3/4 inch
- Size - 2 inch (Construction A)
- Size - 2 inch (Construction B)
- Size - 2-1/4 inch

2. APPLICABLE DOCUMENTS

2.1 Government documents.

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2.1.1 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

FEDERAL

- QQ-A-250/4 - Aluminum Alloy 2024, Plate and Sheet
- QQ-A-250/12 - Aluminum Alloy 7075, Plate and Sheet
- QQ-B-613 - Brass, Leaded and Non-Leaded: Flat Products
(Plate, Bar, Sheet and Strip)
- QQ-S-698 - Steel, Sheet and Strip, Low Carbon
- TT-E-529 - Enamel, Alkyd, Semigloss
- TT-P-1757 - Primer Coating, Zinc Chromate, Low Moisture
Sensitivity
- PPP-B-566 - Boxes, Folding, Paperboard
- PPP-B-636 - Box, Fiberboard
- PPP-B-676 - Boxes, Setup

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- MIL-F-495 - Finish, Chemical, Black, For Copper Alloys
- MIL-C-5541 - Chemical Conversion Coatings on Aluminum and
Aluminum Alloys
- MIL-L-35078 - Loads, Unit Preparation of Semiperishable
Subsistence Items; Clothing, Personal Equipage,
General Specification For

STANDARDS

FEDERAL

- FED-STD-595 - Colors Used in Government Procurement

MILITARY

- MIL-STD-105 - Sampling Procedures and Tables for Inspection
by Attributes
- MIL-STD-129 - Marking for Shipment and Storage
- MIL-STD-130 - Identification Marking of U.S. Military Property
- MIL-STD-147 - Palletized Unit Loads
- MIL-STD-731 - Quality of Wood Members for Containers and Pallets
- MS 51940 - Loops, Slide (for Equipage)

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

2.2 Non-Government publications. The following documents 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).

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

- A47 - Casting, Iron, Ferritic Malleable
- A380 - Cleaning & Descaling Stainless Steel Parts, Equipment & Systems
- B633 - Zinc on Iron & Steel, Electrodeposited Coatings Of
- D3951 - Standard Practice for Commercial Packaging

(Copies may be obtained from the American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103-1187.)

(Non-Government standards and other publications are normally available from the organizations that prepare or distribute the documents. These documents also may be available in or through libraries or other informational services.)

2.3 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 First article. When specified (see 6.2), a sample shall be subjected to first article inspection (see 6.3), in accordance with 4.3.

3.2 Material. It is encouraged that recycled material be used when practical as long as it meets the requirements of this specification.

3.2.1 Brass, sheet and strip. Brass sheet and strip shall conform to copper alloy No. 268, half-hard temper of QQ-B-613.

3.2.2 Iron castings, malleable. Malleable iron castings shall conform to ASTM A47, except that marking requirements shall be waived.

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3.2.3 Steel, strip low carbon. Low carbon steel strip shall conform to cold rolled, quarter hard temper of QQ-S-698.

3.2.4 Aluminum alloy plate and sheet. Aluminum alloy plate and sheet shall conform to either temper T3 of QQ-A-250/4 or T6 QQ-A-250/12.

3.2.5 Enamel. Enamel shall conform to type II of TT-E-529. The color shall be black, No. 27038 of FED-STD-595.

3.3 Construction. The slide loops shall be in accordance with MS 51940 and as specified hereinafter.

3.3.1 Class 1. Class 1 slide loops shall be stamped from brass specified in 3.2.1.

3.3.2 Class 2. Class 2 slide loops shall be cast from malleable iron specified in 3.2.2.

3.3.3 Class 3. Class 3 slide loops shall be stamped from steel specified in 3.2.3.

3.3.4 Class 5. Class 5 slide loops shall be stamped from aluminum specified in 3.2.4.

3.4 Finish.

3.4.1 Class 1 brass loops. The class 1 brass loops shall be given a black chemical finish conforming to MIL-F-495.

3.4.2 Class 2 malleable iron and class 3 steel loops. Class 2 malleable iron and class 3 steel loops shall be given a phosphate treated zinc plate conforming to type III, class 2 of ASIM B 633, followed by baked enamel specified in 3.2.5.

3.4.3 Class 5 aluminum loops. Class 5 aluminum loops shall be prepared for painting in accordance with class 1A requirements of MIL-C-5541, then coated with primer conforming to TT-P-1757, followed by baked enamel specified in 3.1.5 or, when specified (see 6.2), shall be anodized black.

3.5 Marking for identification. The slide loops shall be marked with the manufacturer's identification in accordance with MIL-STD-130. The identification marks shall be incorporated in such a manner that surface opposite those markings shall show no signs of penetration or unevenness or cause distortion on any part of the slide loops.

3.6 Workmanship. All surfaces shall be free of burrs, slivers, and rough or sharp edges and shall not be broken, cracked, or malformed. Castings shall be free of pits, pores, and blowholes. Enamel shall level out to a

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uniform dry film thickness without runs, drops, streaks, or areas of no film. The coating shall be free from imbedded foreign matter and shall show no evidence of peeling, flaking, or blistering.

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the contractor is responsible for the performance of all inspection requirements (examinations and tests) as specified herein. Except as otherwise specified in the contract or purchase order, 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 this specification where such inspections are deemed necessary to ensure supplies and services conform to prescribed requirements.

4.1.1 Responsibility for compliance. All items shall meet all requirements of sections 3 and 5. The inspection set forth in this specification shall become a part of the contractor's overall inspection system or quality program. The absence of any inspection requirements in the specification shall not relieve the contractor of the responsibility of ensuring that all products or supplies submitted to the Government for acceptance comply with all requirements of the contract. Sampling inspection, as part of manufacturing operations, is an acceptable practice to ascertain conformance to requirements, however, this does not authorize submission of known defective material, either indicated or actual, nor does it commit the Government to accept defective material.

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

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

4.3 First article inspection. When a first article is required (see 3.1 and 6.2), it shall be examined for the defects specified in 4.4.3 and 4.4.4.

4.4 Quality conformance inspection. Unless otherwise specified, sampling for inspection shall be performed in accordance with MIL-STD-105.

4.4.1 Component and material inspection. In accordance with 4.1, components and materials shall be inspected in accordance with all the requirements of referenced documents unless otherwise excluded, amended, modified, or qualified in this specification or applicable purchase document.

4.4.2 In-process examination. Examination shall be made during the manufacturing process to determine compliance with requirements listed in table I. Whenever nonconformance is noted, correction shall be made to affected items and process.

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TABLE I. In-process examinations

Requirement	Requirement paragraph
Class 2 malleable iron and class 3 steel loops are given a phosphate treated zinc plate prior to enameling.	3.4.2
Class 5 aluminum loops are prepared for painting prior to priming.	3.4.3
Class 5 aluminum loops are primed prior to enameling.	3.4.3

4.4.3 End item visual examination. The end items shall be examined for the defects listed in table II. The lot size shall be expressed in units of loops. The sample unit shall be one loop. The inspection level shall be II and the acceptable quality level (AQL), expressed in terms of defects per hundred units, shall be 2.5 for major defects and 6.5 for total (major and minor combined) defects.

TABLE II. Classification of defects

Examine	Defect	Classification	
		Major	Minor
Finish	Not as specified	101	
	Not color specified (as applicable)		201
	Area of no film	102	
	Not continuous, or is not smooth		202
	Contains runs, drops or streaks		203
	Foreign matter imbedded		204
	Evidence of peeling, flaking or blistering	103	
Construction and workmanship	Wet or tacky enamel		205
	Burr, sliver, rough or sharp edge	104	
	Broken, cracked or malformed	105	
Marking	Casting has pits, pores or blow holes	106	
	Missing, incorrect, misspelled, or illegible		206
	Surfaces opposite markings show signs of penetration, unevenness, or distortion		207

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4.4.4 End item dimensional examination. The end items shall be examined for dimensions listed in MS 51990C. The lot size shall be expressed in units of loops. The sample unit shall be one loop. The inspection level shall be S-2 and the AQL, expressed in terms of defects per hundred units, shall be 4.0.

4.4.5 Packaging examination. The fully packaged end items shall be examined for the defects listed below. The lot size shall be expressed in units of shipping containers. The sample unit shall be one shipping container fully packaged. The inspection level shall be S-2 and the AQL, expressed in terms of defects per hundred units, shall be 2.5.

<u>Examine</u>	<u>Defect</u>
Marking (exterior and interior)	Omitted; incorrect; illegible; of improper size, location, sequence, or method of application
Materials	Any component missing, damaged, or not as specified
Workmanship	Inadequate application of components, such as: incomplete sealing or closure of flap, improper taping, loose strapping or inadequate stapling Bulged or distorted container
Content	Number per container is more or less than required

4.4.6 Palletization examination. The fully packaged and palletized end items shall be examined for the defects listed below. The lot size shall be expressed in units of palletized unit loads. The sample unit shall be one palletized unit load, fully packaged. The inspection level shall be S-1 and the AQL, expressed in terms of defects per hundred units, shall be 6.5.

<u>Examine</u>	<u>Defect</u>
Finished dimensions	Length, width, or height exceeds specified maximum requirement
Palletization	Pallet pattern not as specified Load not bonded as specified
Weight	Exceeds maximum load limits
Marking	Omitted; incorrect; illegible; of improper size, location, sequence, or method of application

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5. PACKAGING

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

5.1.1 Level A preservation. Unless otherwise specified (see 6.2), loops of one class, style and size only shall be packaged in the quantity specified in table IV in a snug-fitting fiberboard box conforming to style RSC, type CF, variety SW, or type SF, class domestic, grade 200, of PPP-B-636. Each box shall be agitated from time to time to assure a compact and well-filled box. When packaging quantities are other than those specified in table IV, loops of one class, style, and size only shall be packaged in boxes conforming to PPP-B-566, PPP-B-676, or PPP-B-636. Closure shall be in accordance with the appendix of the applicable box specification.

5.1.2 Commercial preservation. Loops shall be preserved in accordance with ASTM D 3951.

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

5.2.1 Level A. Unless otherwise specified (see 6.2), loops of one class, style, and size only, packaged as specified in 5.1, shall be packed in the quantity specified in table IV in shipping containers conforming to style FIC, grade V2s of PPP-B-636. Boxes shall be arranged in unit loads in accordance with MIL-L-35078 for the type and class of load specified. Each shipping container shall be closed and reinforced with strapping or tape banding in accordance with the appendix of PPP-B-636.

5.2.2 Level B. Unless otherwise specified (see 6.2), loops of one class, style and size only, packaged as specified in 5.1, shall be packed in the quantities specified in table IV, in a snug-fitting fiberboard shipping container conforming to style FIC, type CF, class domestic, variety DW, grade 350 of PPP-B-636. Each shipping container shall be closed and reinforced as specified in 5.2.1.

TABLE IV. Packaging and packing of loops, slide

Class, style, and size of loop	Quantity per fiberboard box	Quantity per shipping container
Class 1		
Style 2		
Size 5/8 inch	1,200	7,200
1 inch	1,000	6,000
1-1/4 inch	800	4,800

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TABLE IV. Packaging and packing of loops, slide (cont'd)

Class, style, and size of loop	Quantity per fiberboard box	Quantity per shipping container
Class 1 (cont'd)		
Style 2 (cont'd)		
1-1/2 inch	700	4,200
1-3/4 inch	420	2,520
2 inch (Construction A)	700	4,200
2 inch (Construction B)	550	3,300
2-1/4 inch	550	3,300
Class 2		
Style 1		
Size 2 inch	800	4,800
Style 2		
Size 5/8 inch	1,500	9,000
1 inch	1,300	7,800
1-1/4 inch	1,100	6,600
1-1/2 inch	1,000	6,000
1-3/4 inch	850	5,100
2 inch (Construction A)	475	2,850
2 inch (Construction B)	600	3,600
2-1/4 inch	500	3,000
Class 3		
Style 2		
Size 5/8 inch	1,200	7,200
3/4 inch (Construction C)	1,200	7,200
1 inch (Construction B)	1,000	6,000
1 inch (Construction C)	1,000	6,000
1-1/4 inch	1,000	6,000
1-1/2 inch	750	4,500
1-3/4 inch	450	2,700
2 inch (Construction A)	750	4,500
2 inch (Construction B)	600	3,600
2-1/4 inch	600	3,600

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TABLE IV. Packaging and packing of loops, slide (cont'd)

Class, style, and size of loop	Quantity per fiberboard box	Quantity per shipping container
Class 5		
Style 2		
Size 5/8 inch	3,500	21,000
1 inch	3,000	18,000
1-1/4 inch	2,500	15,000
1-1/2 inch	2,200	13,200
1-3/4 inch	1,900	11,400
2 inch (Construction A)	1,400	8,400
2 inch (Construction B)	1,700	10,200
2-1/4 inch	1,800	10,800

5.2.2.1 Weather resistant shipping containers. When specified (see 6.2), the shipping container shall be a grade V3c, V3s, or V4s fiberboard box fabricated in accordance with PPP-B-636 and closed in accordance with method III of PPP-B-636.

5.2.3 Commercial packing. Loops preserved as specified in 5.1 shall be packed in accordance with ASTM D 3951.

5.3 Palletization. When specified (see 6.2), loops, packed as specified in 5.2 or 5.2.3, shall be palletized on a 4-way entry pallet in accordance with load type Ia of MIL-STD-147. Pallet types shall be type I (4-way entry), type IV, or type V in accordance with MIL-STD-147. Pallets shall be fabricated from wood groups I, II, III, or IV of MIL-STD-731. Each prepared load shall be bonded with primary and secondary straps in accordance with bonding means C and D or film bonding means F or G. Pallet pattern shall be in accordance with appendix of MIL-STD-147.

5.4 Marking. In addition to any special marking required by the contract or purchase order, shipping containers shall be marked in accordance with MIL-STD-129 or ASTM D 3951 as applicable.

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 slide loops covered by this specification are intended for use by the Military on equipment items.

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6.2 Acquisition requirements. Acquisition documents must specify the following:

- a. Title, number, and date of this specification.
- b. Type, class, and size (see 1.2).
- c. Issue of DODISS to be cited in the solicitation, and if required, the specific issue of individual documents referenced (see 2.1.1 and 2.2).
- d. When a first article is required (see 3.1, 4.3, and 6.3).
- e. When an anodized black finish is required for class 5 loops (see 3.4.3).
- f. Levels of preservation and packing (see 5.1 and 5.2).
- g. When quantities other than those specified in table IV are required (see 5.1.1, 5.2.1, and 5.2.2).
- h. Type and class of unit load (see 5.2.1).
- i. When weather-resistant grade fiberboard shipping containers are required for level B packing (see 5.2.2.1).
- j. When palletization is required (see 5.3).

6.3 First article. When a first article is required, it shall be inspected and approved under the appropriate provisions of FAR 52.209. The first article should be a preproduction sample. The contracting officer should specify the appropriate type of first article and the number of units to be furnished. The contracting officer should also include specific instructions in acquisition documents regarding arrangements for selection, inspection, and approval of the first article.

6.4 Sample. For access to samples, address the contracting activity issuing the invitation for bids or request for proposal.

6.5 Cleaning and descaling. Caution should be taken during any plating, cleaning, descaling, passivation, or similar process. The contractor shall be responsible for the safe reutilization and disposal of all material generated by these processes in accordance with ASTM A380, sections 8.2 and 8.7.

6.6 Subject term (key word) listing.

Buckle
Hardware
Strap

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

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Custodians:

Army - GL
Air Force - 99
Navy - YD

PREPARING ACITIVITY

Army - GL
(Project 5340-2008)

Review activities:

Army - MD
Navy - MC

User activities:

Army - EA, AV, ME, MI

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.

RECOMMEND A CHANGE		1. DOCUMENT NUMBER MIL-I-3851E	2. DOCUMENT DATE (YYMMDD) 1991 March 28
3. DOCUMENT TITLE Loops, Slide (for Equipage)			
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 (Include Company Name, if any)		b. ORGANIZATION	
c. ADDRESS (Include Zip Code)		d. CITY/STATE/ZIP	e. DATE SUBMITTED (YYMMDD)
7. PREPARING ACTIVITY			
a. NAME U.S. Army Natick RD&E Center		b. TELEPHONE (Include Area Code) (1) Commercial 508-651-4532 (2) AUTOVON 256-4532	
c. ADDRESS (Include Zip Code) Commander, U.S. Army Natick RD&E Center		IF YOU DO NOT RECEIVE A REPLY WITHIN 45 DAYS, CONTACT: Defense Quality and Standardization Office	