

MIL-B-286D
23 March 1987
SUPERSEDING
MIL-B-286C
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MILITARY SPECIFICATION

BUTTONS, TACK; AND TACK, BUTTON

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

1. SCOPE

1.1 Scope. This document covers metal tack buttons and button tacks.

1.2 Classification. Tack buttons and button tacks shall be of the following types and sizes as specified (see 6.2).

1.2.1 Button, tack.

Type I - Plain
Size - 22 line
Size - 27 line
Size - 30 line
Size - 40 line

Type II - Burst of Glory
Size - 27 line

1.2.2 Tack, button.

Type IX - Button tack
Size - 14 line by 0.406 inch prong length
Size - 17 line by 0.406 inch prong length
Size - 17 line by 0.437 inch prong length
Size - 17 line by 0.750 inch prong length

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to U.S. Army Natick Research, Development, and Engineering Center, Natick, MA 01760-5014, 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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2. APPLICABLE DOCUMENTS

2.1 Government documents.

- * 2.1.1 Documents. The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents shall be those listed in the issue of the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation.

SPECIFICATIONS

FEDERAL

- | | |
|-----------|---|
| PPP-B-566 | - Boxes, Folding, Paperboard |
| PPP-B-636 | - Boxes, Shipping, Fiberboard |
| PPP-B-665 | - Boxes; Paperboard, Metal Edged and Components |
| PPP-B-676 | - Boxes, Setup |

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- | | |
|-------------|--|
| MIL-F-495 | - Finish, Chemical, Black, for Copper Alloys |
| MIL-L-35078 | - Loads, Unit: Preparation of Semiperishable Subsistence Items; Clothing, Personal Equipment and Equipage; General Specification For |

STANDARDS

MILITARY

- | | |
|-------------|---|
| MIL-STD-105 | - Sampling Procedures and Tables for Inspection by Attributes |
| MIL-STD-129 | - Marking for Shipment and Storage |
| MIL-STD-147 | - Palletized Unit Loads |

- * 2.1.2 Other Government documents. The following other Government documents form a part of this document to the extent specified herein. Unless otherwise specified, the issues shall be those in effect on the date of the solicitation.

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DRAWINGS

U.S. ARMY NATICK RESEARCH, DEVELOPMENT, AND ENGINEERING CENTER

- | | |
|---------|--|
| 4-1-430 | - Buttons, Tack and Tack, Button |
| 4-1-431 | - Buttons, Tack and Tack, Button - Jig for Strength Test |

(Copies of documents required by contractors in connection with specific acquisition functions should be obtained from the contracting activity or as directed by the contracting activity.)

- * **2.2 Other 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 shall be those listed in the issue of the DODISS specified in the solicitation. Unless otherwise specified, the issues of documents not listed in the DODISS shall be the issues of the nongovernment documents which are current on the date of the solicitation.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

D 3951 - Standard Practice for Commercial Packaging

(Application for copies shall be addressed to the American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.)

(Technical society and technical association documents are generally available for reference from libraries. They are also distributed among technical groups and using Federal agencies.)

- * **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 shall take precedence. Nothing in this document, however, shall supersede applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

3.1 First article. When specified in the contract or purchase order, a sample shall be subjected to first article inspection (see 4.3, 6.2, and 6.3).

3.2 Standard product. Tack buttons and button tacks shall be standard current products of the manufacturer, except as modified herein (see Drawing 4-1-430).

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3.3 Materials. Materials not definitely specified shall be of the quality normally used by the manufacturer for tack buttons and button tacks provided the completed item complies with all provisions of this document (see 6.4).

3.4 Construction. The tack and button shall be made of brass, except the tack prong may be made of copper. The design detail of type II tack button (Burst of Glory) shall be clear, unmarred, unobliterated, and as shown on Drawing 4-1-430. Material composition and thickness shall withstand the forming operations without wrinkling or cracking. When tested as specified in 4.5.1, the complete and assembled buttons and tacks shall sustain a pull of not less than 60 pounds without deforming or separation of the components or assembly.

3.5 Finish.

3.5.1 Button. The front and back of the button shall receive a black chemical finish in accordance with MIL-F-495, except that the gloss rating may be a maximum of 40. The finish shall show resistance to hot soap solution and accelerated weathering in accordance with MIL-F-495.

3.5.2 Tack. The tack cap and prong shall receive either a black chemical finish in accordance with MIL-F-495 except tests need not apply, or a commercial black oxide finish. At the option of the contractor, the cap may receive an additional clear organic finish achieving a maximum gloss rating of 40.

3.6 Workmanship. The back and front of the finished buttons and the caps of the tacks shall be clean and free from any rough or sharp edge, burr or sliver, oil, dents, digs, pits, wrinkles, grease or dirt. Buttons and tacks shall not be cracked, broken, or malformed.

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 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 document where such inspections are deemed necessary to assure supplies and services conform to prescribed requirements.

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* 4.1.1 Responsibility for compliance. All items must meet all requirements of sections 3 and 5. The inspection set forth in this document shall become a part of the contractor's overall inspection system or quality program. The absence of any inspection requirement in the document shall not relieve the contractor of the responsibility of assuring that all products or supplies submitted to the Government for acceptance comply with all requirements of the contract. Sampling in quality conformance does not authorize submission of known defective material, either indicated or actual, nor does it commit the Government to acceptance of 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 6.2), it shall be examined for the defects specified in 4.4.2 and 4.4.3 and tested as specified in 4.4.4. The presence of any defect or failure of any test shall be cause for rejection of the first article.

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 document or applicable purchase document.

* 4.4.2 End item visual examination. The end item shall be examined for the defects listed in table I. The lot size shall be expressed in units of buttons or tacks. The sample unit shall be one button of one type and size and one tack of one size. The inspection level shall be II and the acceptable quality level (AQL), expressed in terms of defects per hundred units, shall be 25 for major defects and 4.0 for total (major and minor combined) defects.

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TABLE I. End item visual defects

Examine	Defect	Classification	
		Major	Minor
Finish	Finish missing on back and front of button and tack cap and prong	101	
	Not color specified		201
Workmanship	Button or cap of tack not clean; evidence of oil, grease, or dirt		202
	Rough or sharp edge, burr or sliver, dent, dig, pits, or wrinkles on button or cap of tack	102	
	Button or tack cracked, broken, or malformed	103	
Construction	Not fabricated as specified, such as wrong type	104	
	Detail of design of "Burst of Glory" is marred, missing, or obliterated or is not clear (when applicable)		105

4.4.3 End item dimensional examination. The end item shall be examined for the dimensions specified on Drawing 4-1-430. Any dimension not within the specified tolerance shall be classified as a defect. The lot size shall be expressed in units of buttons or tacks. The sample unit shall be one button of one type and size or one tack of one size. The inspection level shall be S-2 and the AQL, expressed in terms of defects per hundred units, shall be 4.0.

4.4.4 End item testing. Testing of the completely fabricated buttons and tacks shall be performed in accordance with tests specified in table II for the characteristics shown therein. The lot size shall be expressed in units of tacks. The sample unit for testing the strength shall be one button and one tack. The sample unit for testing the finish shall be three buttons, one for each test. There shall be one determination per test performed, and the results shall be reported as pass or fail. The inspection level shall be S-1 and the AQL, expressed in terms of defects per hundred units, shall be 2.5.

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TABLE II. End item testing

Characteristic	Requirement paragraph	Test method
Strength	3.4	4.5.1
Finish:		
Resistance to hot soap solution	3.5.1	MIL-F-495
Resistance to accelerated weathering	3.5.1	MIL-F-495
Color and gloss	3.5.1	MIL-F-495

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 of buttons or tacks per intermediate container, if applicable is more or less than specified ^{1/} Number of intermediate containers is more or less than required Weight of contents is more than required

^{1/} For this defect one intermediate container shall be examined.

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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 Interlocking of loads 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

4.5 Method of inspection.

4.5.1 Strength test. Attach the buttons by tacks to a cloth strap or webbing of sufficient dimensions and strength to conduct this test. Insert the button in a jig similar to that shown on Drawing 4-1-431. Hold the jig in the upper jaws of a testing machine that exerts a pull at the rate of 12 inches (± 0.5 inch) per minute. Hold the cloth strap or webbing in the lower jaws and apply the pull force to determine compliance with 3.4.

* 5. PACKAGING

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

5.1.1 Level A. One thousand buttons of one type and size only, or tacks of one size only, shall be unit packed in a snug-fitting paperboard box conforming to PPP-B-566, PPP-B-665 or PPP-B-676. Closure of each box shall be in accordance with the appendix of the applicable container document.

5.1.2 Commercial. Buttons of one type and one size only, and tacks of one size only, 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).

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5.2.1 Level A. Twenty thousand buttons of one type and one size only, or tacks of one size only, preserved as specified in 5.1, shall be packed in a snug-fitting fiberboard shipping container conforming to style optional, grade V2s of PPP-B-636. The shipping container shall be completely filled with no voids and of a size that can be palletized in accordance with MIL-STD-147. Each container shall be closed in accordance with the appendix of PPP-B-636. Shipping containers shall be arranged in unit loads in accordance with MIL-L-35078 for the type and class of load specified (see 6.2). Strapping shall be limited to nonmetallic strapping, except for type II, class F loads.

5.2.2 Level B. Twenty thousand buttons of one type and one size only, or tacks of one size only, preserved as specified in 5.1, shall be packed in a snug-fitting fiberboard shipping container conforming to style RSC, type CF (variety SW) or SF, class domestic, grade 275 of PPP-B-636. The dimensions of the shipping container shall be as specified in 5.2.1 and it shall be closed in accordance with the appendix of PPP-B-636.

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

5.2.3 Commercial. Buttons or tacks, preserved as specified in 5.1, shall be packed in accordance with ASTM D 3951.

5.3 Palletization. When specified (see 6.2), buttons or tacks, packed as specified in 5.2.2 or 5.2.2.3, shall be palletized on a 4-way entry pallet in accordance with load type Ia of MIL-STD-147. Pallet type shall be type I (4-way entry), type IV or type V in accordance with MIL-STD-147. Each prepared load shall be bonded with primary and secondary straps in accordance with bonding means K and L or film bonding means O or P. Pallet pattern shall be in accordance with the appendix of MIL-STD-147. Interlocking of loads shall be effected by reversing the pattern of each course.

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

6. NOTES

6.1 Intended use. Tack buttons and button tacks are intended for use as fastening devices generally used on work clothing, work uniforms, and other items of equipage.

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6.2 Ordering data. Acquisition documents should specify the following:

- a. Title, number, and date of this document.
- b. Type and size required, as applicable (see 1.2).
- c. When a first article is required (see 3.1, 4.3, and 6.3).
- d. Selection of the applicable levels of preservation and packing (see 5.1 and 5.2).
- e. Type and class of unit load required (see 5.2.1.2).
- f. Whether weather-resistant class fiberboard shipping containers are required for level B packing (see 5.2.2.3).
- g. 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 include specific instructions in all acquisition instruments regarding arrangements for selection, inspection, and approval of the first article.

6.4 Recycled material. It is encouraged that recycled material be used when practical as long as it meets the requirements of this document (see 3.3).

6.5 Subject term (key word) listing.

Button, tack
Fasteners
Tack, button

6.6 Changes from previous issue. The margins of this document are marked with an asterisk (*) to indicate where changes (additions, modifications, corrections, deletions) from the previous issue were made. This was done as a convenience only, and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content, as written, irrespective of the marginal notations and relationship to the last previous issue.

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