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SUPERSEDING
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FEDERAL SPECIFICATION

BUTTON, SEWING HOLE, AND BUTTON, STAPLE, (PLASTIC)

This specification is 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 sewing-hole and staple buttons, primarily intended for use on outer clothing, undergarments, and equipage. Toggles and rings for staple buttons are also included.

1.2 Classification.

1.2.1 Types and classes. Buttons shall be of the following types and classes, as specified (see 6.2).

Type II - Sewing-hole buttons (see figure 1)
Class D - Melamine formaldehyde composition
Class K - Pearlescent-polyester composition

Type III - Staple buttons (see figure 2)
Class A - Melamine formaldehyde composition
Class E - Pearlescent-polyester composition

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

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V-B-871F

1.2.2 Styles.

1.2.2.1 Buttons shall be of the styles shown on figures 1 and 2 and as specified (see 6.2).

1.2.2.1.1 Metal shanks, toggles, and button rings shall be of the styles shown on figure 2, and as specified (see 6.2).

1.2.3 Size. The size of the buttons as measured by the diameter in lines shall be as specified (see 6.2).

NOTE: One line = 1/40 inch.

2. APPLICABLE DOCUMENTS

2.1 Government publications. The following documents, of the issues in effect on the date of invitation for bids or request for proposal, form a part of this specification to the extent specified herein.

Federal Specifications:

A-A-203	- Paper, Kraft, Untreated
PPP-B-566	- Boxes, Folding, Paperboard
PPP-B-636	- Boxes, Shipping, Fiberboard
PPP-B-676	- Boxes, Setup
PPP-T-45	- Tape, Gummed, Paper, Reinforced and Plain, For Sealing and Securing

Federal Standard:

FED-STD-123 - Marking for Shipment (Civil Agencies)

(Activities outside the Federal Government may obtain copies of Federal specifications, standards, and commercial item descriptions as outlined under General Information in the Index of Federal Specifications, Standards and Commercial Item Descriptions. The Index, which includes cumulative bimonthly supplements as issued, is for sale on a subscription basis by the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402-0001.)

(Single copies of this specification, and other Federal specifications, standards, and commercial item descriptions required by activities outside the Federal Government for bidding purposes are available without charge from General Services Administration Business Service Centers in Boston, MA; New York, NY; Philadelphia, PA; Washington, DC; Atlanta, GA; Chicago, IL; Kansas City, MO; Fort Worth, TX; Denver, CO; San Francisco, CA; Los Angeles, CA; and Seattle, WA.)

V-B-871F

(Federal Government activities may obtain copies of Federal standardization documents and the Index of Federal Specifications, Standards and Commercial Item Descriptions from established distribution points in their agencies.)

Military Specifications:

MIL-L-35078 - Loads, Unit: Preparation of Semiperishable Subsistence Items, Clothing, Personal Equipment and Equipage; General Specification For

Military Standards:

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
MIL-STD-731 - Quality of Wood Members for Containers and Pallets

(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.)

2.2 Other publications. The following documents form a part of this specification to the extent specified herein. Unless a specific issue is identified, the issue in effect on date of invitation for bids or request for proposal shall apply.

The Color Association of the United States

Department of Defense Standard Shades for Buttons

(Application for copies should be addressed to The Color Association of the United States, 343 Lexington Avenue, New York, NY 10016-0927.)

American Society for Testing and Materials (ASTM)

B 117 - Salt Spray (Fog) Testing

D 3951 - Standard Practice for Commercial Packaging

(Application for copies should be addressed to the American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103-1187.)

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. Nothing in this specification, however, shall supersede applicable laws and regulations unless a specific exemption has been obtained.

V-B-871F

3. REQUIREMENTS

3.1 Standard sample. The finished buttons shall match the standard samples for color and finish and shall be equal to or better than the standard samples with respect to all characteristics for which the standard sample is referenced (see 6.3).

3.2 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 6.4).

3.3 Material.

3.3.1 Molding compound. The molding plastic material shall be a melamine formaldehyde compound or a pearlescent-polyester compound as specified (see 1.2.1) of a quality which will be suitable for producing buttons conforming to the requirements specified herein.

3.3.2 Metal components (type III staple buttons).

3.3.2.1 Metal shanks. Shanks shall be made of drawn round or half-round steel, wire, zinc alloy, or brass, conforming to commercial standards, except that bell or undercut shanks, stab or screw shanks can be stamped from brass or zinc or diecast from zinc alloy.

3.3.2.2 Rings and toggles. Rings and toggles shall be made of hard-drawn spring steel wire conforming to commercial standards.

3.3.2.3 Finish. All metal components shall be plated with any suitable white metal or metallic compound, except that cadmium shall not be used.

3.4 Styles. Buttons shall conform to the styles shown on figures 1 and 2.

3.5 Dimensions. The dimensions of the buttons shall be as shown in tables I and II.

TABLE I. Dimensions, type II, sewing-hole buttons

Styles for class D	Styles for class K	Size (diameter) 1/		Over-all thickness (min) 4/			
		Lines	Inch 2/	Class D		Class K	
		Lines	Inch 2/	Lines	Inch 2/	Lines	Inch 2/
15, 19	-	18	0.450	4	0.100	-	-
15, 19, 24, 24A, 29	-	20	0.500	4	0.100	-	-
24, 24A	-	22	0.550	4	0.100	-	-
4, 19	-	22	0.550	5	0.125	-	-

V-B-871F

TABLE I. Dimensions, type II, sewing-hole buttons (cont'd)

Styles for	Styles for	Size (diameter) <u>1/</u>		Over-all thickness (min) <u>4/</u>			
				Class D		Class K	
class D	class K	Lines	Inch <u>2/</u>	Lines	Inch <u>2/</u>	Lines	Inch <u>2/</u>
19, 20, 21	-	24	0.600	5	0.125	-	-
-	25	14	0.350	-	-	4	0.100
-	25	16	0.400	-	-	4	0.100
-	25	17	0.425	-	-	4	0.100
-	25	19	0.475	-	-	4	0.100
-	25	21	0.525	-	-	4	0.100
4	-	27	0.675	5	0.125	-	-
19, 20, 21	-	30	0.750	5	0.125	-	-
20, 21	-	34	0.850	5	0.125	-	-
20, 21	-	40	1.000	7	0.175	-	-
20, 21	-	45	1.125	7	0.175	-	-
26	-	30	0.750	8	0.200	-	-
26	-	45	1.125	8	0.200	-	-

TABLE II. Dimensions, type III, staple buttons

Styles for	Styles for	Size (diameter) <u>1/</u>		Over-all thickness (min) <u>3/</u> , <u>4/</u>			
				Class A		Class E	
class A	class E	Lines	Inch <u>2/</u>	Lines	Inch <u>2/</u>	Lines	Inch <u>2/</u>
-	5 <u>5/</u>	21	0.525	-	-	10	0.25
-	6 <u>6/</u>	21	0.525	-	-	10	0.25
-	3	22	0.550	-	-	4	0.100
-	3	24	0.600	-	-	4	0.100
1	3	30	0.750	8	0.200	4	0.100

1/ Tolerance shall be \pm one line for polyester plastic buttons and \pm one half line for melamine plastic buttons.

2/ Decimal equivalent.

3/ For type III, thickness shall be measured without staples.

V-B-871F

- 4/ Thickness measurements shall be reported to the nearest full line. Actual thickness shall be measured and recorded but the value obtained shall be carried to the nearest full line for reporting purposes. For example, a measurement of 3.49 shall be reported as 3 line, whereas a measurement of 3.50 shall be reported as 4 line.
- 5/ Style 5 is hemispherical in shape. The 12-1/2 shank (including eye) shall be stab or screw and shall protrude from the back of the button not less than 12-1/2 lines and not more than 15 lines.
- 6/ Style 6 shall be the same as style 5, except that the shank (including the eye) shall be stab or screw and shall protrude from the back of the button not less than 5 lines and not more than 7-1/2 lines.

3.6 Color and finish.

3.6.1 Color. The color of the buttons shall be as specified (see 6.2). Unless otherwise specified, the color shall conform to an approved standard shade. Shade designations by letter and related cable numbers refer to the Department of Defense Standard Shades for Buttons. Coloration shall be made during formulation of the molding compound.

3.6.2 Finish. The finish of the button shall be glossy unless otherwise specified (see 6.2). The finish shall be uniform and a reasonably close match to the standard button sample (see 6.2 and 6.3).

3.7 Detailed requirements.

3.7.1 Type II - sewing hole buttons.

3.7.1.1 Design. Buttons shall conform to the design shown on figure 1 for the style required.

3.7.1.2 Resistance to chalking (class D). Buttons shall not exhibit chalking when tested as specified in 4.4.2.2.

3.7.1.3 Compressive strength. The compressive strength of type II buttons shall be as shown in table III when tested as specified in 4.4.2.2.

V-B-871F

TABLE III. Compressive strength of type II buttons

Class	Style	Size (lines)	Average compressive strength minimum (pounds)
D	4	22, 27	1000
D	15	18, 20	1000
D	19	18, 20, 22, 24, 30	500
D	20, 21	24, 30, 34, 45	800
D	24, 24A	20, 22	150
D	26	30, 45	1800
D	29	20	1000
K	25	16, 17, 19, 21	500

3.7.1.4 Resistance to water (class K). Buttons shall show no crazing or distortion and shall not exhibit yellowing or loss in color or luster when tested as specified in 4.4.2.2.

3.7.1.5 Resistance to heat (class K). Buttons shall show no softening, distortion, crazing, yellowing, or loss of color when tested as specified in 4.4.2.2.

3.7.2 Type III, staple buttons.

3.7.2.1 Design. Staple buttons shall conform to the design shown on figure 2. The metal shank shall be firmly secured to the center back of the button and shall be supplied with a fastener device consisting of 7/16-inch metal button ring or a 3/4-inch metal toggle conforming to the design shown on figure 2. Dimensions of rings and toggles shall be as shown on figure 2.

3.7.2.2 Salt-spray resistance. All metal parts shall be capable of withstanding a 96-hour continuous exposure to salt spray when tested as specified in 4.4.2.2 without showing rusting or corrosion products which cannot be removed when wiped with a soft cloth.

3.7.2.3 Resistance to chalking (class A). Buttons shall not exhibit chalking when tested as specified in 4.4.2.2.

3.7.2.4 Shank pull strength. Button shanks shall have an average pull strength of not less than 25 pounds when tested as specified in 4.4.2.2.

V-B-871F

3.7.2.5 Compressive strength. Staple buttons shall have a compressive strength of not less than 100 pounds when tested as specified in 4.4.2.2.

3.7.2.6 Resistance to water (class E). Buttons shall show no crazing or distortion and shall not exhibit yellowing or loss in color or luster when tested as specified in 4.4.2.2.

3.7.2.7 Resistance to heat (class E). Buttons shall show no softening, distortion, crazing, yellowing, or loss in color when tested as specified in 4.4.2.2.

3.7 Workmanship. The finished buttons shall conform to the quality of product established by this document and 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 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 specification where such inspections are deemed necessary to assure supplies and services conform to prescribed requirements.

4.1.1 Responsibility for compliance. All items must 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 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.

4.1.2 Certificates of compliance. When certificates of compliance are submitted, the Government reserves the right to inspect such items to determine the validity of the certification.

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 4.4.2.1.1, 4.4.2.1.2, and 4.4.2.1.3 and tested as specified in 4.4.2.2. The presence of any defect or failure to pass any test shall be cause for rejection of the first article.

V-B-871F

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 specifications, drawings, and standards unless otherwise excluded, amended, modified, or qualified in this specification or applicable purchase document.

4.4.1.1 Certification. The contractor shall furnish certificates of compliance for the requirements specified in table IV.

TABLE IV. Component certification

Component	Characteristic	Requirement paragraph
Molding compound	Material identification	3.3.1
Metal shanks	Material identification and finish	3.3.2.1 and 3.3.2.3
Rings and toggles	Material identification and finish	3.3.2.2 and 3.3.2.3
Coloration	Made during formulation of molding compound	3.6.1

4.4.2 End item inspection.

4.4.2.1 End item examination. The end items shall be examined in accordance with 4.4.2.1.1, 4.4.2.1.2, and 4.4.2.1.3. The lot size shall be expressed in units of:

- a. One gross of buttons of the same style, class, and size.
- b. One gross of toggles or rings.

4.4.2.1.1 Visual examination (buttons). Buttons shall be examined for the defects listed below. The sample unit shall be one button. The inspection level shall be I and the acceptable quality level (AQL), expressed in terms of defects per hundred units, shall be 4.0.

V-B-871F

<u>Examine</u>	<u>Defect</u>
Design	Not in conformance with design, i.e., type, class, and style specified in contract or as shown on figures 1 or 2, as applicable
Color and finish	Color or finish not as specified, i.e., does not compare favorably with standard sample Mottled
Workmanship	Nicked, gouged, cracked, scratched, dented, disfigured, or malformed Any fin, flash, or chip Not clean, stained, spotted, or inclusion of foreign matter Any segregation that is clearly noticeable Pitted, porous, or rough surface Sharp edge or flash around the periphery or in a sewing hole (when in doubt probe sewing hole with shank end of drill or needle of suitable diameter) Holes not uniformly spaced
Shank (type III button only)	Shank missing Shank not centered in the back of button Not firmly secured Shank not specified style Shank bent or shank eye malformed Shank not plated Shank plating finish is not continuous or is cut through, porous, not adherent, or is otherwise impaired Burr, fin, sliver, rough, or sharp edge Metal cracked or fractured

4.4.2.1.2 Visual examination (rings and toggles). Toggles and rings shall be examined for the defects listed below. The sample unit shall be one ring or toggle. The inspection level shall be I and the AQL, expressed in terms of defects per hundred units, shall be 4.0.

<u>Examine</u>	<u>Defect</u>
Design	Design not as specified Damaged, bent, malformed, or otherwise defective affecting serviceability
Finish	Not plated Plating finish is not continuous or is cut through, porous, not adherent, or otherwise impaired

V-B-871F

<u>Examine</u>	<u>Defect</u>
Workmanship	Burr, fin, sliver, rough, or sharp edge Metal cracked or fractured

4.4.2.1.3 Dimensional examination. The end item shall be examined for conformance to dimensions specified in tables I and II. Any measurement deviating from the specified dimension shall be classified as a defect. The sample unit shall be one button, toggle, or ring, as applicable. The inspection level shall be S-2. The presence of any defect shall be cause for rejection of the lot.

4.4.2.2 End item testing. The end items shall be tested for the characteristics specified in table V. The lot size shall be expressed in units of one gross of buttons, toggles, or rings, as applicable. The sample unit shall be the number of buttons necessary to provide one button for each of the applicable tests in table V (each type III button shall include a ring or toggle, as applicable). Any test failure shall be cause for rejection of the lot. The sample size shall be as follows:

<u>Lot size (lot unit)</u>	<u>Sample size (no. of sample units)</u>
800 or less	2
801 up to and including 22,000	3
22,001 or more	5

TABLE V. End item tests

<u>Characteristic</u>	<u>Requirement</u>	<u>Test method</u>	<u>Number of determinations per sample unit</u>
Compressive strength	3.7.1.3 and 3.7.2.5	4.5.2	1
Resistance to chalking (classes A and D)	3.7.1.2 and 3.7.2.3	4.5.1	1
Resistance to water (classes E and K)	3.7.1.4 and 3.7.2.6	4.5.5	1

V-B-871F

TABLE V. End item tests (cont'd)

Characteristic	Requirement	Test method	Number of determinations per sample unit
Resistance to heat (classes E and K)	3.7.1.5 and 3.7.2.7	4.5.6	1
Shank pull strength (type III only)	3.7.2.4	4.5.4	1
Salt spray (type III only)	3.7.2.2	4.5.3	1

4.4.3 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
Weight	Net weight of contents above maximum requirement

V-B-871F

4.4.4 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 Methods of inspection.

4.5.1 Chalking test. Buttons shall be immersed in a boiling solution of 0.8 percent by weight sulphuric acid for 10 minutes and immediately thereafter dried and examined by holding the buttons at arm's length and examining them under a strong white light. Any chalking as evidenced by a dry chalk-like appearance or deposit on the surface of the button shall be considered a test failure.

4.5.2 Compressive strength test. Compressive strength of buttons shall be conducted using apparatus which permits gradual application of the load either by a manual or automatic hydraulic mechanism. The load indicating mechanisms (gage) shall be capable of showing the total compressive load carried by the button; however, the gage shall be so calibrated, that the load deflection at the point of button failure is at least one-third of the total capacity of the gage. Buttons shall be placed face down one at a time between flat blocks of steel, and tested to failure. Failure is defined as the first sign of a crack in the button visible to the naked eye (a visible crack in the button will usually be found at the first audible sound of cracking). The load in pounds which produces this failure shall be recorded as the compressive strength of the button. Extreme care shall be taken to apply the pressure centrally and evenly over the entire surface of the button which is in contact with the steel blocks. When testing staple buttons, the shank shall be removed flush with the back of the buttons. In case of conflict, test equipment with an automatic stress-strain recorder shall be used for referee testing. The rate of head travel shall not exceed 0.050 inches per minute. The compressive strength shall be taken from the chart as the highest reading in pounds prior to the first drop in the curve which occurs when the button cracks. The

V-B-871F

results for all the buttons in the sample shall be averaged and reported to the nearest 1 pound. Failure of the average to conform to the specified requirement shall be considered a test failure.

4.5.3 Salt spray test. The salt-spray test shall be conducted as specified in ASTM B 117.

4.5.4 Shank pull strength test. The button shall be mounted in a suitably sized jig having a hole of proper size to clear the shank anchorage but capable of holding to the body of the button. The jig shall than be clamped in one of the jaws of a pendulum (inclined balance) type of tensile testing machine. A heavy wire shall be inserted in the eye of the shank and shall be clamped in the other jaw of the machine. The jaw at which the load is applied shall move at a uniform rate of 12 ± 2 inches per minute under no load. The load in pounds required to produce separation shall be recorded. The results for all the buttons in the sample shall be averaged and reported to the nearest 0.1 pound. Failure of the average to conform to the specified requirement shall be considered a test failure.

4.5.5 Resistance to water test. The button shall be immersed in boiling distilled water for 1 hour and immediately thereafter dried and examined by holding the button at arm's length under a strong white light. Any evidence of crazing, distortion, yellowing, or loss in color or luster shall be considered a test failure.

4.5.6 Resistance to heat test. A household flat iron, heated to a temperature of 275° to 300° F shall be applied to the button to be tested for 1 minute. The sole temperature of the iron shall be checked with a surface pyrometer. The button shall be sewn to cloth for testing. The button shall be examined by holding the button at arm's length under a strong white light. Any softening, distortion, crazing, yellowing, or loss in color shall be considered a test failure.

5. PACKAGING

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

5.1.1 Level A.

5.1.1.1 Type II. Sewing hole buttons, of one class, style, size, color, and finish only shall be unit packed in a snug-fitting setup paperboard box conforming to type I, variety 1, class A or C, style 3 or 4 of PPP-B-676; or a folding paperboard box conforming to variety 1, style III, type G, class i, group I, of PPP-B-566. Boxes shall be provided with thumb notches. Buttons measuring 30 line and smaller shall be unit packed 12 gross to a box, except that 30 line, style 26 buttons shall be unit packed 6 gross to a box. Buttons measuring 34 line and larger shall be unit packed 5 gross to a box. Box closure shall be secured with a 2-inch minimum width gummed paper tape

V-B-871F

conforming to type III, grade B of PPP-T-45, applied at the center of the length opening and extending along the bottom and up the sides at least 2 inches.

5.1.1.2 Type III. Staple buttons of one class, style, size, shank, color, and finish only shall be unit packed as specified in 5.1.1.1, except that the quantity packaged shall be 5 gross to a box. An equal quantity of toggle or button ring attachments shall be placed in end opening style envelopes, one gross per envelope and packed together with the buttons in the paperboard box prior to closing. The envelopes shall be made of 60 pound minimum basis weight kraft paper conforming to type I, grade B of A-A-203 and shall be securely sealed.

5.1.2 Commercial. Sewing hole buttons and staple buttons with toggles or button rings as specified 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 packing. Buttons of one type, class, style, size, shank, color, and finish, preserved as specified in 5.1, shall be packed in a snug-fitting shipping container conforming to style RSC, grade V2s of PPP-B-636. Each shipping container shall be closed in accordance with method III, waterproofed in accordance with method V as specified in the appendix of PPP-B-636, except that the inspection shall be in accordance with 4.4.3. The weight of the contents of each shipping container shall not exceed 65 pounds. 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). When unit loads are strapped, strapping shall be limited to nonmetallic strapping, except for type II, class F loads.

5.2.2 Level B packing. Buttons of one type, class, style, size, shank, color, and finish, 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. Each shipping container shall be closed in accordance with method II as specified in the appendix of PPP-B-636, except that the inspection shall be in accordance with 4.4.3. The weight of the contents of each shipping container shall not exceed 65 pounds.

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 as specified in the appendix of PPP-B-636, except that the inspection shall be in accordance with 4.4.3.

V-B-871F

5.2.3 Commercial packing. Sewing hole buttons and staple buttons, preserved as specified in 5.1, shall be packed in accordance with ASTM D 3951.

5.3 Palletization. When specified (see 6.2), buttons, packed as specified in 5.2.2 and 5.2.3, 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. 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 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.

5.4.1 Civil agencies. In addition to any special marking required by the contract or purchase order, unit packs, shipping containers, and palletized unit loads shall be marked in accordance with FED-STD-123 or ASTM D 3951, as applicable.

5.4.2 Military requirements. In addition to any special marking required by the contract or purchase order, unit packs, 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. Styles as shown on figures 1 and 2 are generally used as follows:

TYPE II. Sewing-hole buttons (Figure 1)

<u>Style</u>	<u>Garment</u>
4	Trousers
15	Stay buttons
19	Drawers, cotton shorts, sweaters, pajamas
19	Women's food handler dresses
20 and 21	Coats, coveralls, frocks, overcoats, raincoats, shirts, trousers, slacks
24 and 24A	Shirts
25	Women's shirts, men's shirts
25	Women's short and long sleeve AG-415 shirts
26	Combat clothing, Arctic clothing (Army)
29	Women's shorts

V-B-871F

TYPE III. Staple buttons (Figure 2)

<u>Style</u>	<u>Garment</u>
1	Coats
3	Uniforms
5	Nurse's white caps
6	Belts for hospital uniform

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, class, style, and size of button required (see 1.2.1, 1.2.2, and 1.2.3).
- c. Style of shank, toggle, or button ring required for type III button (see 1.2.2.1.1).
- d. When a first article is required (see 3.2, 4.3, and 6.4).
- e. Color and finish required (see 3.6).
- f. Selection of applicable levels of preservation and packing (see 5.1 and 5.2).
- g. Type and class of unit load required (see 5.2.1).
- h. When weather-resistance grade fiberboard shipping containers are required for level B packing (see 5.2.2.1).
- i. When palletization is required (see 5.3).

6.3 Standard sample. For access to samples, address the contracting activity issuing the invitation for bids.

6.4 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.

6.5 Subject term (key word) listing.

Botton
 Clothing accessories
 Sewing-hole button
 Staple button

V-B-871F

MILITARY INTERESTS:

Custodians

Army - GL
Navy - NU
Air Force - 99

Review Activities

Army - MD
Navy - MC
Air Force - 11, 82
DLA-CT

User Activities

Navy - CG
Air Force - 45

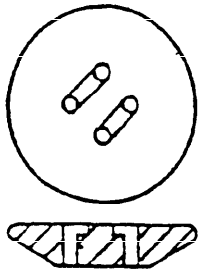
CIVIL AGENCY COORDINATING ACTIVITIES:

GSA-FSS
JUS-FPI
DCG
USDA-AFS

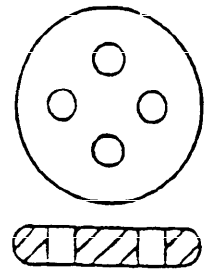
PREPARING ACTIVITY:

Army - GL

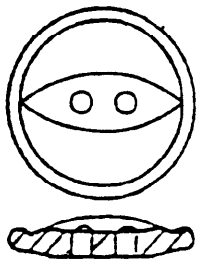
Project No. 8315-0333



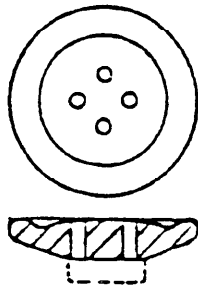
STYLE 4



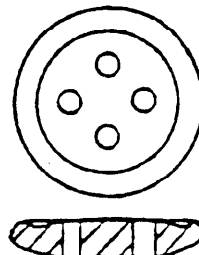
STYLE 15



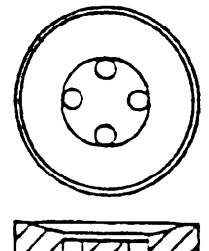
STYLE 19



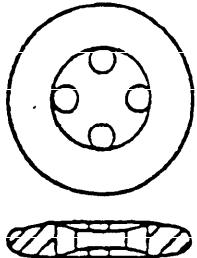
STYLE 20/21



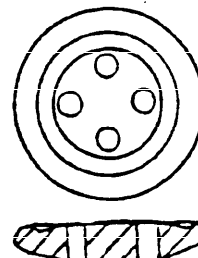
STYLE 24



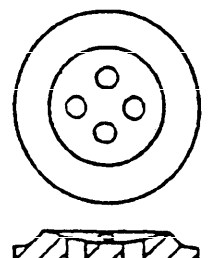
STYLE 25



STYLE 26



STYLE 24A



STYLE 29

NOTE:

1. BUTTONS OF THE SAME STYLE BUT OF DIFFERENT SIZES MAY DIFFER IN APPEARANCE BECAUSE OF THE CHANGING RATIOS BETWEEN BUTTON SIZE, BUTTON THICKNESS, SEWING HOLE DIAMETER, AND SEWING HOLE SPACING.
2. STYLES 19-20-21. STUD SIZES SHALL BE AS SUPPLIED BY MANUFACTURER. STYLES 20 AND 21 MAY BE SUPPLIED WITHOUT STUDS.

FIGURE 1. Buttons, sewing-hole (type II).

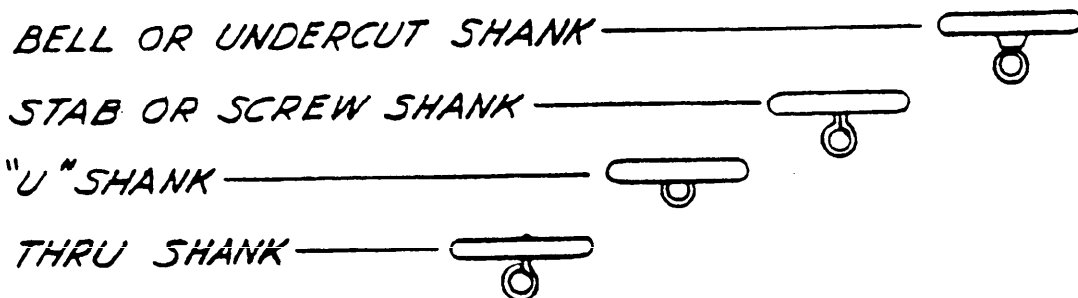
V-B-871F

STYLES



NOTE:

ANY OF THE FOLLOWING STYLES OF SHANKS MAY BE USED WITH TYPE III BUTTONS, AS SPECIFIED



SHANKS

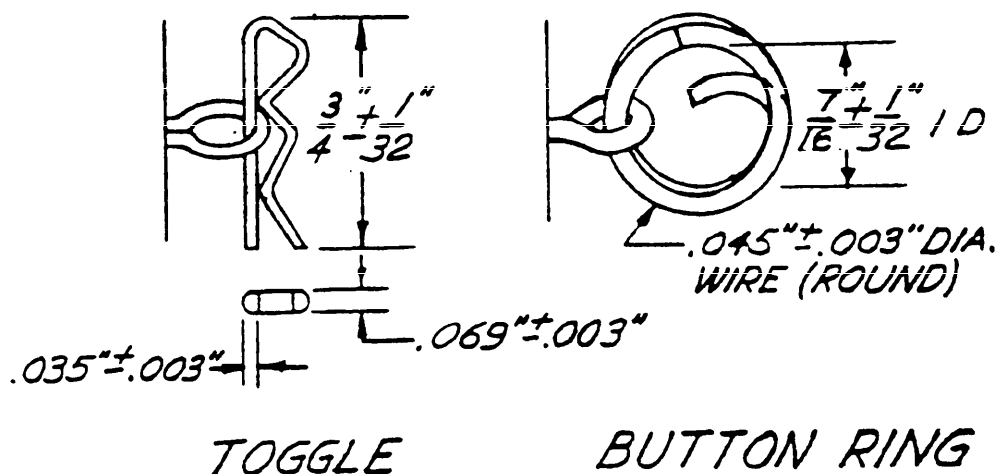


FIGURE 2. Buttons, staple (type III).

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STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

(See Instructions - Reverse Side)

1. DOCUMENT NUMBER V-B-871F		2. DOCUMENT TITLE Button, Sewing Hole, And Button, Staple, (Plastic)	
3a. NAME OF SUBMITTING ORGANIZATION		4. TYPE OF ORGANIZATION <i>(Mark one)</i>	
b. ADDRESS <i>(Street, City, State, ZIP Code)</i>		<input type="checkbox"/> VENDOR <input type="checkbox"/> USER <input type="checkbox"/> MANUFACTURER <input type="checkbox"/> OTHER <i>(Specify):</i> _____	
5. PROBLEM AREAS			
a. Paragraph Number and Wording:			
b. Recommended Wording:			
c. Reason/Rationale for Recommendation:			
6. REMARKS			
7a. NAME OF SUBMITTER <i>(Last, First, MI) - Optional</i>		b. WORK TELEPHONE NUMBER <i>(Include Area Code) - Optional</i>	
c. MAILING ADDRESS <i>(Street, City, State, ZIP Code) - Optional</i>		8. DATE OF SUBMISSION (YYMMDD)	