

MIL-F-51184A(MU)
19 January 1973
SUPERSEDING
MIL-F-51184(MU)
26 April 1965

MILITARY SPECIFICATION

FASTENERS, SNAP

1. SCOPE

1.1 Scope. This specification covers two types of snap fasteners.

1.2 Classification. The fasteners shall be of the following types, as specified (see 6.2):

Type I - Tubular or solid stud, sizes 1 through 4 (Drawing D22-10-61)

Type II - Button (Drawing C22-10-63)

2. APPLICABLE DOCUMENTS

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

SPECIFICATIONS

FEDERAL

RR-S-366 - Sieve, Test.

CCC-C-419 - Cloth, Duck, Cotton, Unbleached, Plied-Yarns, Army and Numbered.

MILITARY

MIL-W-530 - Webbing, Textile, Cotton, General Purpose, Natural or in Colors.

MIL-G-9954 - Glass Beads: for Cleaning and Peening.

STANDARDS

FEDERAL

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

MIL-F-51184A(MU)

MILITARY

MIL-STD-105 - Sampling Procedures and Tables for Inspection by
Attributes.

DRAWINGS

US ARMY MUNITIONS COMMAND

EDGEWOOD ARSENAL

D22-10-61 - Fastener, Snap.
C22-10-63 - Fastener, Snap.

(Copies of specifications, standards, drawings, and publications required by suppliers in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer.)

3. REQUIREMENTS

3.1 Materials and components. All materials and components shall conform to the specifications and drawings forming a part of this specification.

3.2 Manufacture and assembly. The fasteners shall be manufactured and assembled as specified on the applicable drawings.

3.3 Installation (Type I). The prongs on the back plate shall readily penetrate the cotton duck without prepiercing when installed as specified in 4.2.4.1.1.

3.4 Functioning.

3.4.1 Type I. The fasteners shall readily snap and unsnap at the point on the periphery of the socket normally used when manually operated as specified in 4.2.4.1.1 and 4.2.4.1.2.

3.4.2 Type II. The fasteners shall readily snap and unsnap at any point on the periphery of the button when manually operated as specified in 4.2.4.1.3.

3.5 Separation. The socket and clinch plate and the stud and washer, of the type I, shall not separate nor shall the head pull off the stud when tested as specified in 4.2.4.2.

3.6 Workmanship. The fasteners, or any component thereof, shall be free from damage, defects, or foreign matter.

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection.

4.1.1 Supplier's responsibility. Unless otherwise specified in the contract or purchase order, the supplier is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract or order, the supplier may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to assure supplies and services conform to specified requirements.

4.1.2 Objective evidence. The supplier shall provide objective evidence acceptable to the contracting officer that the requirements of 3.1 and section 5 for which specific inspection has not been provided in this specification have been satisfied.

4.2 Quality conformance inspection.

4.2.1 Lotting. A lot shall consist of fasteners of one type produced by one manufacture, at one plant, from the same materials, under essentially the same manufacturing conditions.

4.2.2 Sampling.

4.2.2.1 For examination and nondestructive tests. Sampling shall be conducted in accordance with MIL-STD-105.

4.2.2.2 For destructive tests. Sampling shall be conducted in accordance with MIL-STD-105, level S-2.

4.2.3 Inspection procedure.

4.2.3.1 For examination and nondestructive tests. Sample fasteners shall be examined in accordance with the classification of defects and MIL-STD-105.

4.2.3.2 For destructive tests. Sample fasteners shall be tested in accordance with 4.2.4.1, as applicable, 4.2.4.2, and MIL-STD-105 using an AQL of 1.0 percent defective each, for acceptance.

MIL-F-51184A(MU)

4.2.3.3 Classification of defects.(a) Fasteners, snap (Dwg as specified in 6.2).CategoriesDefectsCritical: None definedMajor: AQL 1.0 percent defective

101	Component missing or incorrectly assembled
102	Type, shape, or size incorrect
103	Damage, defects, or foreign matter (3.6)

Minor: AQL 2.5 percent defective

201 Protective finish missing

4.2.4 Tests.4.2.4.1 Functioning.

4.2.4.1.1 Type I. The fastener, a socket and a clinch plate, shall be installed in the center of a triple thickness of plied-yarns cotton duck, approximately 6 inches by 1-1/2 inches, conforming to type I, No. 10, hard texture, of CCC-C-419, with the longitudinal axis of the socket and clinch plate parallel to the long side of the cotton duck. A stud and a washer shall be assembled to the center of a single thickness of cotton webbing, approximately 6 inches by 3/4 inch, conforming to type II or IIa of MIL-W-530. The installed fasteners shall be manually operated by snapping and unsnapping them several times.

4.2.4.1.2 Type I with dust and sand. The fasteners shall be installed in accordance with 4.2.4.1.1. A mixture of 79 parts by weight of dust and sand and 21 parts by weight of water shall be prepared. The dust and sand part shall consist of 90 parts by weight of glass beads conforming to size 7 of MIL-G-9954 and 10 parts by weight of natural silica sand which meets the following requirements: 15.00 \pm 0.04 gram shall be retained on a 841-micron sieve conforming to type I or II, class 4, of RR-S-366, and 5.00 \pm 0.03 gram shall pass through a 595-micron sieve after 5 minutes of continuous sieving of a 100.00 \pm 0.15 gram sample. This mixture shall be worked into the socket of each fastener in such a manner as to completely fill the hole. The fastener shall then be snapped and unsnapped four times, if possible, refilling the socket with the mixture after each complete cycle.

MIL-F-51184A(MU)

4.2.4.1.3 Type II. The fastener, a socket assembly and a button assembly, shall be installed in the center of a double thickness of plied-yarns cotton duck, approximately 6 inches by 1-1/2 inches, conforming to type I, No. 10, hard texture of CCC-C-419. A stud and an eyelet shall be installed in the center of a double thickness of plied-yarns cotton duck, approximately 6 inches by 3/4 inch, conforming to type I, No. 10, hard texture of CCC-C-419. The fasteners shall be manually operated by snapping and unsnapping them several times.

4.2.4.2 Separation. The fasteners shall be installed in accordance with 4.2.4.1.1. Radial cracks in the eyelet portion of the stud, which occur during installation, shall not be cause for rejection provided and stud and washer meet the separation test. Each fastener shall be snapped in the conventional manner and installed in a standard tensile testing machine with one end of the webbing attached to the lower jaw so that the fastener is approximately 1-1/2 inches from the jaw. The distance between the jaws shall be three inches. The appropriate end of the 3-ply cotton duck shall be attached to the upper jaw in line with the end of the webbing, and a tensile load of 36 pounds shall be applied to the end opposite the end normally used in opening fasteners of these types, at a separation rate of 12 inches per minute.

5. PREPARATION FOR DELIVERY

5.1 Interplant shipment (see 6.3). The snap fasteners shall be packaged and packed to prevent damage in shipment from the supply source to the first receiving activity. Shipping containers shall be in compliance with the rules and regulations applicable to the mode of transportation.

5.2 Marking. In conjunction with information provided in the contract or order, marking shall be in accordance with FED-STD-123 and shall include contract or purchase order number.

5.3 Repair parts. When this item is procured for storage and issue as a repair part, preservation, packaging, packing, and marking shall be as specified on the packaging data sheet which is identified by the Federal Stock Number.

6. NOTES

6.1 Intended use. The fasteners are intended to be used on protective mask carriers and similar items.

MIL-F-51184A(MU)

6.2 Ordering data. Procurement documents should specify the following:

- (a) The title, number, and date of this specification.
- (b) The type of fastener required.
- (c) The title, number, and date of the applicable drawings.
- (d) The size stud required for type I fasteners.
- (e) The number of dies required to assemble the lot of components.

6.3 Interplant shipment. Packaging and packing for interplant shipment is for supplies and materials that do not directly enter the military supply system. Typical interplant shipments are from a vendor to a contractor or from a supplier to a military arsenal.

Custodian:

Army - MU

Preparing activity:

Army - MU(EA)

Project No. 5325-A115

SPECIFICATION ANALYSIS SHEET		Form Approved Budget Bureau No. 22-R255
<p>INSTRUCTIONS: This sheet is to be filled out by personnel, either Government or contractor, involved in the use of the specification in procurement of products for ultimate use by the Department of Defense. This sheet is provided for obtaining information on the use of this specification which will insure that suitable products can be procured with a minimum amount of delay and at the least cost. Comments and the return of this form will be appreciated. Fold on lines on reverse side, staple in corner, and send to preparing activity. Comments and suggestions submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or serve to amend contractual requirements.</p>		
SPECIFICATION		
ORGANIZATION		
CITY AND STATE	CONTRACT NUMBER	
<p>MATERIAL PROCURED UNDER A</p> <p><input type="checkbox"/> DIRECT GOVERNMENT CONTRACT <input type="checkbox"/> SUBCONTRACT</p>		
<p>1. HAS ANY PART OF THE SPECIFICATION CREATED PROBLEMS OR REQUIRED INTERPRETATION IN PROCUREMENT USE?</p> <p>A. GIVE PARAGRAPH NUMBER AND WORDING.</p>		
<p>B. RECOMMENDATIONS FOR CORRECTING THE DEFICIENCIES</p>		
2. COMMENTS ON ANY SPECIFICATION REQUIREMENT CONSIDERED TOO RIGID		
<p>3. IS THE SPECIFICATION RESTRICTIVE?</p> <p><input type="checkbox"/> YES <input type="checkbox"/> NO (If "yes", in what way?)</p>		
<p>4. REMARKS (Attach any pertinent data which may be of use in improving this specification. If there are additional papers, attach to form and place both in an envelope addressed to preparing activity)</p>		
SUBMITTED BY (Printed or typed name and activity - Optional)		DATE

DD FORM 1426
1 JAN 66

REPLACES EDITION OF 1 OCT 64 WHICH MAY BE USED.

FOLD

POSTAGE AND FEES PAID

OFFICIAL BUSINESS

Commanding Officer
Edgewood Arsenal
ATTN: SMUEA-TS-S
Edgewood Arsenal, MD 21010

FOLD