

INCH-POUND

A-A-50041C
February 21, 1990
SUPERSEDING
A-A-50041B
February 24, 1988

COMMERCIAL ITEM DESCRIPTION

SNAP LINK, MOUNTAIN PITON, LOCKING AND NONLOCKING

The General Services Administration has authorized the use of this commercial item description.

1. CLASSIFICATION

1.1 Classification. The snap links shall be of the following types (see 5.2):

- Type I - Steel, zinc plated, locking (1460 kg)
- Type II - Steel, zinc plated, locking (3600 kg)
- Type III - Aluminum nonlocking (1800 kg)

2. SALIENT CHARACTERISTICS

2.1 Type I snap link. The type I snap link shall be zinc plated steel. The snap link shall be oval shaped. The snap link gate shall be threaded and fitted with a nut. The nut may be screwed into place over the opening between the gate and the snap link body to prevent inadvertent opening of the gate during use. The gate and the locking nut shall operate easily without jamming in either the open or closed positions. The hinge pin attaching the gate to the body shall be tightly peened or pressed into the body of the snap link. The color of the snap link shall be that of natural zinc plated steel and its maximum weight shall be 150 grams.

Beneficial comments, recommendations, additions, deletions, clarifications, etc. and any data which may improve this document should be sent to: Commander, U.S. Army Natick Research, Development, and Engineering Center, Natick, MA 01760-5014.

AMSC N/A

FSC 8465

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2.2 Type II snap link. The type II snap link shall be zinc plated steel. The snap link shall be "D" shaped. The snap link gate shall be threaded and fitted with a nut. The nut may be screwed into place over the opening between the gate and the snap link body to prevent inadvertent opening of the gate during use. The gate and the locking nut shall operate easily without jamming in either the open or closed positions. The hinge pin attaching the gate to the body shall be tightly peened or pressed into the body of the snap link. The color of the snap link shall be that of natural zinc plated steel and its maximum weight shall be 224 grams.

2.3 Type III snap link. The type III snap link shall be aluminum construction. The snap link shall be "D" shaped. The hinge pin attaching the gate to the body shall be tightly peened or pressed into the body of the snap link. The gate shall operate easily without jamming in either direction. The color of the snap link shall be that of natural aluminum, and its maximum weight shall be 98 grams.

2.4 Proof loading.

2.4.1 Type I. The type I snap link shall be capable of withstanding a 910 kg proof test load in the longitudinal direction with the gate in the closed position and the locking nut in the open position without any deformation. The snap link shall also be capable of withstanding a 1460 kg proof test load in the longitudinal direction with the nut in the locked position without the snap link breaking or cracking. Testing shall be as specified in 3.4.1.

2.4.2 Type II. The type II snap link shall be capable of withstanding a 2300 kg proof test load in the longitudinal direction with the gate in the closed position and the locking nut in the open position without any deformation. The snap link shall also be capable of withstanding a 3600 kg proof test load in the longitudinal direction with the nut in the locked position without the snap link breaking or cracking. Testing shall be as specified in 3.4.2.

2.4.3. Type III. The type III nonlocking snap link shall be capable of withstanding a 1800 kg proof test load in the longitudinal direction and the gate in the closed position without the snap link breaking or cracking. Testing shall be as specified in 3.4.3.

2.5 Identification marking. All snap links shall be stamped with the manufacturer's identification symbol, and its maximum rated test strength.

3. QUALITY ASSURANCE

3.1 Certification. The contractor shall certify, and maintain substantiating evidence, that the product offered meets the salient characteristics and requirements of this Commercial Item Description, and that the product conforms to the producer's own drawings, specifications, standards, and quality assurance practices. The Government reserves the right to require proof of such conformance prior to first delivery and thereafter as may be otherwise provided for under the provisions of the contract.

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3.2 Visual examination. Each lot of snap links shall be inspected in accordance with MIL-STD-105. The inspection level shall be II and the acceptable quality level (AQL), expressed in terms of defects per hundred units, shall be 4.0. The lot size shall be expressed in units of snap links. The sample unit shall be one snap link. The snap links shall be examined for the defects listed below:

Finish not smooth and adherent; not free of burrs, rough spots, sharp edges, slivers, flat areas or projections; any component missing or not specified type; any component fractured, split, dented, bowed, malformed, damaged or loose; markings in wrong location, incomplete, illegible, incomplete, or not as specified.

3.3 Dimensional examination. The snap links shall be examined without damaging or disassembling the snap links. Any dimension not within the specified tolerances shall be classified as a defect. The lot size shall be expressed in units of snap links. The sample unit shall be one snap link. The inspection level shall be S-3 and the AQL, expressed in terms of defects per hundred units, shall be 2.5.

3.4 Proof load tests. For proof load testing any industrial testing machine may be used to determine compliance with the requirements specified in 2.4.1, 2.4.2, and 2.4.3.

3.4.1 Type I. Any desired operating speed may be used until a load of 590 kg is reached. After reaching that point the speed shall be maintained at not more than 4 inches per minute or less than 1 inch per minute until a load of 910 kg is reached. This load shall be maintained for not less than 10 nor more than 15 seconds. Any deformation of the snap link shall constitute failure of this test. Deformation shall be determined by operating the gate, if the gate functions properly there is no deformation of the snap link. Snap links with the gate closed and the locking nut in the closed position shall be tested in accordance with the same procedure except that the final load shall be 1460 kg. The snap links shall withstand the 1460 kg load without breaking or cracking. Snap links subjected to this test shall be discarded. Snap links shall be tested for operation of the locking nut and gate by screwing the nut from the open position to the locked position and then back to the open position. The gate shall then be moved from the closed position to the completely open position and then released. Any jamming of the nut or gate shall be considered a failure. The sampling for this test shall be in accordance with MIL-STD-105. The inspection level shall be S-2. Any test failure shall be cause for rejection of the lot.

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3.4.2 Type II. Any desired operating speed may be used until a load of 1600 kg is reached. After reaching that point the speed shall be maintained at not more than 4 inches per minute or less than 1 inch per minute until a load of 2300 kg is reached. This load shall be maintained for not less than 10 nor more than 15 seconds. Any deformation of the snap link shall constitute failure of this test. Deformation shall be determined by operating the gate, if the gate functions properly there is no deformation of the snap link. Snap links with the gate closed and the locking nut in the closed position shall be tested in accordance with the same procedure except that the final load shall be 3600 kg. The snap links shall withstand the 3600 kg load without breaking or cracking. Snap links subjected to this test shall be discarded. Snap links shall be tested for operation of the locking nut and gate by screwing the nut from the open position to the locked position and then back to the open position. The gate shall then be moved from the closed position to the completely open position and then released. Any jamming of the nut or gate shall be considered a failure. The sampling for this test shall be in accordance with MIL-STD-105. The inspection level shall be S-2. Any test failure shall be cause for rejection of the lot.

3.4.3 Type III. Any desired operating speed may be used until a load of 1170 kg is reached. After reaching that point the speed shall be maintained at not more than 4 inches per minute or less than 1 inch per minute until a load of 1800 kg is reached. This load shall be maintained for not less than 10 nor more than 15 seconds. The snap links shall withstand the 1800 kg load without breaking or cracking. Snap links subjected to this test shall be discarded. Snap links shall be tested for operation of the gate by moving the gate from the closed position to the completely open position and then released. Any jamming of the gate shall be considered a failure. The sampling for this test shall be in accordance with MIL-STD-105. The inspection level shall be S-2. Any test failure shall be cause for rejection of the lot.

4. PACKAGING

4.1 Packaging and packing. Packaging and packing shall be commercial or export as specified (see 5.2).

4.2 Commercial packaging and packing. Each snap link shall be packaged and packed in accordance with ASTM D 3951.

4.3 Export packaging and packing.

4.3.1 Export packaging. Twelve snap links of one type only, shall be packaged in an intermediate box. The intermediate box shall be snug-fitting and fabricated from corrugated fiberboard conforming to style RSC, type CF, class domestic, grade 200 of PPP-B-636. Each intermediate box shall be closed in accordance with the appendix of PPP-B-636.

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4.3.2 Export packing. One hundred and twenty snap links of one type only, packaged as specified above, shall be packed in a close-fitting, style RSC corrugated fiberboard shipping container conforming to type CF, class domestic, grade 275 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 shipping container shall be closed in accordance with the appendix of PPP-B-636.

4.3.3 Palletization. When specified (see 5.2), snap links packed as specified above, shall be palletized on a 4-way entry pallet in accordance with load type Ia of MIL-STD-147. 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, in accordance with MIL-STD-147.

4.4 Marking (commercial and export). In addition to any special markings required by the contract or purchase order, intermediate boxes, shipping containers and palletized unit loads, shall be marked in accordance with MIL-STD-129, or ASTM D 3951, as applicable.

5. NOTES

5.1 Intended use. The commercial snap links (locking and non-locking) covered by this Commercial Item Description are for use in rapelling and erecting fixed rope installation for the movement of troops and materials.

5.2 Ordering data.

- a. Title, number, and date of this document.
- b. Type of snap link required (see 1.1).
- c. Selection of applicable packaging and packing required (see 4.1).
- d. When palletization of shipping containers is required (see 4.3.3).

5.3 Sources of documents.

5.3.1 Source for nongovernment association documents.

ASTM D 3951 - Standard Practice for Commercial Packaging, is available from:

The American Society for Testing and Materials (ASTM)
1916 Race Street
Philadelphia, PA 19103-1187

5.3.2 Source of government documents. Copies of military and Federal documents are available from:

Standardization Documents Order Desk
Bldg. 4D, 700 Robbins Avenue
Philadelphia, PA 19111-5094

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MILITARY INTERESTS:

Custodians

Army - GL
Navy - NU

Review activity

DLA - CT

CIVIL AGENCY COORDINATING ACTIVITY:

GSA - FSS

PREPARING ACTIVITY:

Army - GL

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