

A-A-1927C  
May 30, 1989  
SUPERCEDING  
A-A-1927B  
December 15, 1987  
MIL-P-17802E  
November 18, 1987

## COMMERCIAL ITEM DESCRIPTION

### PADLOCK (PIN TUMBLER MECHANISM)

The General Services Administration has authorized the use of this commercial item description in preference to Federal Specification FF-P-101, Type EPA and EPB and Military Specification MIL-P-17802.

This description covers key operated, pin tumbler, dead bolt padlocks intended for low security use.

#### Salient characteristics.

Standard padlocks supplied under this commercial item description shall conform with the requirements of this document and all applicable requirements of ASTM F 883 'Standard Performance Specification for Padlocks', Type PO 1, Grade 2 (options as shown below). In the event that the requirements of this document should conflict with ASTM F883, this document shall take precedence.

Special padlocks conforming with Military Standards MS21313 and MS35647 may be specified in which case, the requirements of this document and the cited Military Standard are applicable except that in the event that the requirements of this document should conflict with the cited Military Standard, the Military Standard shall take precedence (this document shall be considered the procurement specification in lieu of MIL-P-17802).

The padlocks shall be of the following types, as specified:

- Type I - Hardened steel shackle with a case of steel, malleable iron, or die cast zinc alloy (See notes).
- Type II - Hardened steel shackle and brass or bronze case.
- Type III - Brass or bronze shackle and case (ASTM F883, option F).  
1/ Unless otherwise specified all padlocks shall be in accordance with ASTM F883 option A (captive key).

Size. Shall be according to case width as follows:

Standard sizes - 1-1/8, 1-1/2 or 1-3/4,  $\pm$  1/16 inch as specified.

Special sizes - In accordance with MS21313 or MS35647 as specified.

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Case. Shall be laminated or solid, at the supplier's option of materials indicated for the type padlock unless otherwise specified. If hardened steel case is specified the case shall be uniformly case hardened steel with a hardness in the range of 40 to 50 on the Rockwell C scale (40-50 HRC).

Shackle. The shackle may be either spring released or pull released. The diameter of the shackle on standard size padlocks shall not exceed 3/8 inch. The diameter of the shackle for the special sizes shall be as specified in MS21313 or MS35647. When case hardened steel shackles are specified, the hardened steel shackle shall be uniformly case hardened steel and shall have a hardness in the range of 50 to 55 on the Rockwell C scale (50-55 HRC). The inside height of the shackle shall be either regular or extended, as specified:

- Regular -  $1 + 1/16$  inch (25.4 + 1.59 mm).
- Extended -  $2 - 1/2 + 1/16$  inches (63.5 + 1.59 mm).
- Special - Inside height as specified and in accordance  
Military Standards MS21313 or MS35647.

Keying. Each padlock shall be furnished with two (2) keys. Padlocks supplied in a group as a set shall be keyed alike, keyed individually, master keyed or grand master keyed, as specified. (Master keyed means that the master key shall open all padlocks in a group, but shall not open locks of another group within a set of groups. Grand master keyed means that the grand master key shall open all padlocks within all groups making up the set). Three additional keys that will open each lock in the set shall be furnished with each set). All keys shall be captive (unremovable) in the cylinder when unlocked unless otherwise specified. When individually keyed padlocks are specified, no key shall operate more than one padlock per 50 padlocks. Unless otherwise specified, padlocks conforming with this commercial item description shall have a cylinder which will accept keys made from key blanks available on the national domestic retail market. The supplier shall identify domestic retail sources for such key blanks upon request.

Chain. Standard padlocks shall be supplied with chains of compatible material to the case, when specified. The chain shall be a minimum of 9 inches in length. Special padlocks shall be supplied with chains as specified in the cited Military Standard.

Mechanism. The padlock mechanism shall conform to the following requirements:

- a. Shall be of the pin tumbler type, key operated. There shall be four (4) or more pin tumblers for 1-1/8 inch size padlocks and five (5) or more pin tumblers for the 1-1/2 inch size and larger padlocks. The mechanism itself shall be brass in a brass shell inserted in the case, except when the case is of solid brass, the shell is not required.
- b. Individually keyed padlocks shall have at least as many possible key changes as show below:
 

1-1/8 inch size	- 3,000
1-1/2 inch size	- 4,000
1-3/4 inch size and larger	- 10,000
- c. The locking mechanism shall be the single or dual deadbolt type, and shall engage the shackle at toe and heel or shall be solely deadbolted at one end and latchbolted at the other. The deadbolt shall be one or two piece construction and shall not depend on spring action to hold the bolt in the locked position. The locking mechanism shall not permit removal of the key in the unlocked position (see keying paragraph).
- d. The cylinder plug of the padlock shall be securely fastened within the case to preclude forcible separation or opening of the padlock without mutilation.

Lubrication. Unless otherwise specified, working parts shall be lubricated as needed with a lubricant normally used for the intended purpose.

Corrosion and deterioration control. The padlocks and chains when specified, shall be fabricated from compatible materials, inherently corrosion and deterioration resistant or treated to provide protection against the various forms of corrosion and deterioration that may be encountered in any of the of applicable storage and use environments to which the padlocks may be exposed. Dissimilar metals which react to produce galvanic corrosion shall be electrically insulated from one another with corrosion inhibiting sealant, chromate tape, varnish or other suitable means.

Finish. Manufacturers standard finish unless otherwise specified. Prior to application of any coating, all exterior surfaces shall have a smooth finish. Sharp exterior edges and burrs shall be removed. The case surface shall have a smooth or tumbled finish for laminated construction.

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Part Numbering. Standard padlocks conforming with this commercial item description shall be identified by a part number configuration consisting of identification of a portion of the specification number, size, shackle, keying, and chain. An example of the part number configuration is shown below. Special padlocks shall be identified by the part number identified in MS21313 or MS35647 as applicable. This part numbering system is intended for identification and cross-indexing of the item within the Federal cataloging system. Part numbers are not required to be placed on the product or container.

## EXAMPLES:

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					Chain (A=with chain, B=without chain).
					Keying (1=individually keyed, 2=keyed alike, 3=master keyed, 4=grand master keyed).
					Shackle (A=reg., 1 in., B=ext., 2.5 in.).
					Size (1=1-1/8 in., 2=1-1/2 in., 3=1-3/4 in.).
					Type (A=type I, B=type II, C=type III).
					General specification number.

MS35647-4 (This part number identifies a special size padlock conforming with MS35647)

Workmanship. The mechanisms of the padlocks shall function smoothly without the application of excessive force. No defects that affect appearance or serviceability shall be permitted.

Quality assurance provisions. 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 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 the specification where such inspections are deemed necessary to assure that supplies and services conform to prescribed requirements.

Lot. All padlocks of the same type, size, shackle, keying and case offered for delivery at one time shall be considered a lot for purposes of inspection.

Sampling for quality conformance examination. A random sample of padlocks shall be selected from each lot in accordance with Military standard, MIL-STD-105 'SAMPLING PROCEDURES AND TABLES FOR INSPECTION BY ATTRIBUTES', inspection level S-2, AQL 6.5 expressed in terms of percent defective. The sample unit shall be one padlock.

Visual and dimensional examination. The sample padlocks shall be visually and dimensionally examined to verify compliance with this description. Tolerance limits specified are absolute limits as defined in ASTM Recommended Practice E29, for Indicating Which Places of Figures Are to Be Considered Significant in Specified Limiting Values.

Testing. Testing of the sample padlocks shall be performed in accordance with ASTM F883 for Type PO 1, grade 2 except that master, grandmaster and keyed alike surreptitious entry testing shall be performed at grade 1 requirements (individually keyed padlocks shall be tested at grade 2 requirements). The special sizes shall resist a tensile force of 500 lbf for 1-1/8 inch size, 800 lbf for 1-1/2 inch size and 1,000 lbf for the 1-3/4 inch size. The hardened materials for type I and type II shall be checked for hardness in accordance with ASTM E18. The hardness test shall be conducted on a surface at a point 1/2 inch minimum from an end or edge. Additionally, each lot of individually keyed padlocks shall be checked to verify that no key will operate more than one padlock per 50 padlocks (at least 3 keys shall be randomly selected from each lot and checked for this requirement) and each master keyed group or grand master keyed set shall be checked to verify that only the master or grand master key will operate more than one padlock within the group or set as applicable.

Certification of test requirements. When specified in the contract or purchase order, a certificate of conformance may be furnished in lieu of actual testing on a lot by lot basis providing that:

- 1) Objective evidence dated not more than two (2) years prior to the date of the start of the contract or date of the purchase order is available for review, that those tests specified in the industry standards referenced herein have been performed by a test facility acceptable to the Government and that the product tested conformed with stated requirements.
- 2) The product being offered has been manufactured by the same manufacturer, using the same material, processes and manufacturing techniques as the product tested.
- 3) The Government shall have the right to require additional testing (at the suppliers expense) if there is reason to believe that the product or products do not conform with stated requirements.

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Examination for preparation for delivery. A random sample of unit, intermediate and shipping containers (as applicable) shall be selected from each lot and examined for conformance with the preservation, packaging, packing, labeling and marking required in the contract or order. Samples shall be selected in accordance with MIL-STD-105, Inspection level S-2, AQL 6.5 expressed in terms of defects per hundred unit.

Preservation, packaging, packing, labeling, and marking. The preservation, packaging, packing, labeling, and marking shall be as specified in the contract or order.

Regulatory requirements. In accordance with section 23.403 of the Federal Acquisition Regulations, the Government's policy is to acquire items composed of the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition without adversely affecting performance requirements or exposing suppliers' employees to undue hazards from the recovered materials. The term "recovered materials" means materials which have been collected or recovered from solid waste and reprocessed to become a source of raw materials as opposed to virgin raw materials. None of the above shall be interpreted to mean that the use of used or rebuilt products are allowed under this commercial item description unless otherwise specified.

Notes.

The COMMERCIAL ITEM CERTIFICATION CLAUSE is not required when this commercial item description is used for procurement.

The issues or revisions of ASTM Standard F 883, ASTM Test Method E18, ASTM Recommended Practice E29 and MIL-STD-105 in effect on the date of solicitation shall be used to determine compliance with stated requirements.

ASTM standards are available from the American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.

Military Standards are available from the Naval Publications and Forms Center, 5801 Tabor Ave., Philadelphia, PA 19120.



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The purchaser shall specify:

Standard padlocks

- a) Type, size, shackle (regular or extended), case (if Type I with hardened steel case is desired, this should be specified).
- b) Keying (keyed individually, keyed alike, master keyed, or grand master keyed).
- c) Noncaptive key if required.
- c) Chain if required.
- d) If certification is acceptable in lieu of lot-by-lot testing. If certification is not specified in the procurement document, complete lot-by-lot testing is required.

Special padlocks

- a) Type, MS21313 or MS35647 and part number.
- b) Shackle clearance height.
- c) Keying (keyed individually, keyed alike, master keyed, or grand master keyed).
- d) Finish if other than suppliers standard finish.
- e) Case (laminated or solid).
- f) Shackle size.
- g) If certification is acceptable in lieu of lot-by-lot testing. If certification is not specified in the procurement document, complete lot-by-lot testing is required.

MILITARY INTERESTS:

PREPARING ACTIVITY:

Military Coordinating Activity:  
NAVY - YD

GSA - FSS

Custodians:

Army - ME  
Navy - YD  
Air Force - 99

Review Activities:

Army - AR, AV  
Navy - SH  
DLA- IS

User Activities:

Army - AT, CE  
Navy - MC, OS, SA