



Designation: F 883 – 97

Standard Performance Specification for Padlocks¹

This standard is issued under the fixed designation F 883; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

This standard has been approved for use by agencies of the Department of Defense.

1. Scope

1.1 This specification contains environmental, functional, operational, and security requirements for padlocks. Included are function descriptions, cycle tests, operational tests, environmental tests, forcing tests, and surreptitious entry tests. No effort has been made to include criteria for specially made padlocks used by the Department of Defense or others in highly sensitive locations.

1.2 This specification describes and grades various levels of performance to provide users of the standard with criteria upon which to select suitable padlocks.

1.3 Tests described are laboratory tests and although they simulate field conditions as to attacks or the environment, they do not duplicate these conditions. Tests described are repeatable in the laboratory.

1.4 Some users of this standard may wish to use padlocks that have special attributes not related to security. These are found in 4.3.

1.5 The values stated in SI units are to be regarded as the standard. The inch-pound units given in parentheses are provided for information only.

1.6 The following precautionary caveat pertains only to the test method portions, Sections 8-11, of this specification: *This standard does not purport to address the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ASTM Standards:

- B 117 Practice for Operating Salt Spray (Fog) Apparatus²
- G 53 Practice for Operating Light- and Water-Exposure Apparatus (Fluorescent UV-Condensation Type) for Exposure of Nonmetallic Materials³

¹ This specification is under the jurisdiction of ASTM Committee F-12 on Security Systems and Equipment and is the direct responsibility of Subcommittee F12.50 on Locking Devices.

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² Annual Book of ASTM Standards, Vol 03.02.

³ Annual Book of ASTM Standards, Vol 14.02.

2.2 ANSI Standard:

- A 156.5 Standard for Auxiliary Locks and Associated Products⁴

3. Terminology

3.1 Definitions of Terms Specific to This Standard:

3.1.1 *acceptance testing*, *v*—to assure by documented testing that a padlock meets specific tests of Specification F 883 as agreed to by the buyer and seller.

3.1.2 *cam*, *n*—a flat actuator or locking bolt attached to the rear of the cylinder perpendicular to its plug and rotated by the key.

3.1.3 *case*, *n*—the housing or body of a lock or latch.

3.1.4 *certified*, *v*—to assure by documented testing that a padlock meets all test requirements appropriate to its grading.

3.1.5 *clevis*, *n*—a fastener attached to a padlock case or shackle for connection of a chain, designed to prevent displacement of a padlock.

3.1.6 *cylinder*, *n*—a complete operating unit which usually consists of the plug, shell, tumblers, springs, plug retainer, a cam/tailpiece or other actuating device, and all other necessary operating parts.

3.1.7 *cylinder biting*, *n*—the group of numbers that represent the biting of a key or the tumblers, or both, of a lock or cylinder.

3.1.8 *decode*, *v*—to determine a key combination by physical measurement of a key or cylinder parts, or both.

3.1.9 *heel*, *n*—the part of a padlock shackle that normally is retained in the case when in the unlocked position.

3.1.10 *impression technique*, *v*—a means of fitting a key directly to a locked cylinder by manipulating a blank in the keyway and cutting the blank where the tumblers have made marks.

3.1.11 *keyway*, *n*—the opening in a lock or cylinder that is shaped to accept a key bit or blade of a proper configuration.

3.1.12 *padlock*, *n*—a detachable and portable lock with a shackle that locks into its case. Components performing the

⁴ Available from American National Standards Institute, 11 W. 42nd St., 13th Floor, New York, NY 10036.