



Standard Specification for Rescue Carabiners¹

This standard is issued under the fixed designation F1956; 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.

1. Scope

1.1 This specification covers six mechanical tests, one corrosion resistance test, and the minimum performance requirements for these tests. This specification applies to carabiners designed specifically for use by rescue personnel during both training exercises and actual rescue operations. This specification does not apply to recreational use carabiners.

1.2 Two different types of carabiners are defined in this specification, a heavy-duty rescue carabiner and a light-duty rescue carabiner.

1.3 The values stated in SI units are to be regarded as the standard.

1.4 Tests contained herein are destructive in nature. Carabiners subjected to any of these tests shall not be used in any way after testing except in evaluation the results of such testing.

1.5 This specification does not imply approval of any method of use of rescue carabiners. In addition, the tests described are laboratory tests and do not duplicate field conditions. Furthermore, the test load values contained herein are not to be interpreted as the forces which a rescue carabiner may be subjected to, or may be expected to sustain, in actual field use.

1.6 This standard may involve hazardous materials, operations, and equipment. *This standard does not purport to address all of 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:²

B117 Practice for Operating Salt Spray (Fog) Apparatus

¹ This specification is under the jurisdiction of ASTM Committee F32 on Search and Rescue and is the direct responsibility of Subcommittee F32.01 on Equipment, Testing, and Maintenance.

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

E4 Practices for Force Verification of Testing Machines

3. Terminology

3.1 Definitions:

3.1.1 *carabiner*—a load-bearing, connective device with a self-closing gate.

3.1.2 *heavy-duty rescue carabiner*—a carabiner that meets the specifications for a heavy-duty rescue carabiner as defined in Section 9.

3.1.3 *light-duty rescue carabiner*—a carabiner that meets the specifications for a light-duty rescue carabiner as defined in Section 9.

3.1.4 *locking carabiner*—a carabiner with a locking mechanism which reduces the possibility of a gate being opened inadvertently. A locking mechanism requires at least two different consecutive manual actions to open the gate (see **Appendix X2**).

3.1.5 *non-locking carabiner*—any carabiner that does not have a locking mechanism that reduces the possibility of a gate being opened inadvertently.

3.1.6 *rescue carabiner*—a carabiner intended for life support in rescue systems. It may be classified as heavy-type or light duty.

3.1.7 *ultimate strength*—the maximum force sustained by a carabiner during an ultimate force test, prior to failure.

3.1.7.1 *failure*—the point at which some part of the carabiner physically breaks or distorts to an extent that the test members are released.

4. Requirements

4.1 *Product information shall include the following items:*

4.1.1 *Manufacturer's or Distributor's Name or Logo*—A clear indication as to who is responsible for the primary manufacture or distribution, or both, of the product.

4.1.2 *Major Axis Gate Closed Ultimate Strength*—A clear indication as to the major axis gate closed strength by either symbol or pictorial representation.

4.1.3 *Minor Axis Gate Closed Ultimate Strength*—A clear indication as to the minor axis gate closed ultimate strength by either symbol or pictorial representation.