



Standard Specification for Intrusion Resistant Generic Vault Structures¹

This standard is issued under the fixed designation F 1247; 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 (€) indicates an editorial change since the last revision or reapproval.

€¹ NOTE—Section 12, Keywords, was added editorially in August 1996.

1. Scope

1.1 This specification is for the use and guidance of those who purchase, design, construct, install, approve, or modify generic vault structures intended for protection of valuables against loss due to forced entry.

1.2 This specification includes the descriptions of terms, classifications, materials, practices, and methods to be followed in constructing, fabricating, or modifying intrusion resistant generic vaults.

1.3 This specification does not address fire resistivity, nor does it address modular panels.

1.4 This specification is not intended to prevent the use of systems, methods, or devices that provide a level of intrusion resistance equivalent or better than that prescribed herein. Any system, method, or device different from that detailed herein may be examined, in accordance with the intent of this specification, and if found to be equivalent or better, may be included.

1.5 Nothing in this specification shall be construed to prohibit better or safer conditions than the requirements specified herein.

1.6 Materials and construction details outlined in this specification are intended to detail protective requirements necessary to achieve the required level of intrusion resistance, and are not intended to address structural soundness or operational fitness, areas for which the project engineer, architect, or equipment supplier are responsible.

1.7 Each referenced document cited in Section 2 shall be meant to be the edition in effect on the date this specification was published.

NOTE 1—A rationale is given in Appendix X1.

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

1.9 The following precautionary statement pertains to the test method portion only, Section 9, of this specification: *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:

A 184/A184M Specification for Fabricated Deformed Steel Bar Mats for Concrete Reinforcement²

A 615 Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement²

A 635 Specification for Steel, Sheet and Strip, Heavy-Thickness Coils, Carbon, Hot-Rolled³

F 1090 Classification for Bank and Mercantile Vault Construction⁴

2.2 Underwriters Laboratories Inc. Standards:⁵

ANSI/UL608 Standard for Burglary Resistant Vault Doors and Modular Panels

ANSI/UL680 Standard for Emergency Vault Ventilators and Vault Ventilating Ports

2.3 American Concrete Institute Standards:⁶

ACI 318 Building Code Requirements for Reinforced Concrete

3. Terminology

3.1 Definitions of Terms Specific to This Standard:

3.1.1 *bar support*—any factory fabricated product, such as chairs, ladders, bolsters, and spacers, that are designed to hold, a specific distance apart, deformed steel bars and expanded steel bank vault mesh in preparation for concrete pouring.

² Annual Book of ASTM Standards, Vol 01.04.

³ Annual Book of ASTM Standards, Vol 01.03.

⁴ Annual Book of ASTM Standards, Vol 15.07.

⁵ Available from Underwriters Laboratories, Inc., 333 Pfingsten Road, Northbrook, IL 60062.

⁶ Available from American Concrete Institute, Box 19150, Redford Station, Detroit, MI 48219.

¹ This specification is under the jurisdiction of ASTM Committee F12 on Security Systems and Equipment and is the direct responsibility of Subcommittee F12.80 on Protective Containment Structures.

Current edition approved Sept. 29, 1989. Published November 1989.