



Designation: F2286 – 05

# Standard Design and Performance Specification for Removable Mesh Fencing for Swimming Pools, Hot Tubs, and Spas<sup>1</sup>

This standard is issued under the fixed designation F2286; 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 ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

## 1. Scope

1.1 This specification outlines the performance and design requirements for removable mesh safety barriers used for barriers for swimming pools, hot tubs, and spas to reduce the incidence of injuries or death for infants and children up to and including five years of age.

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

1.3 *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 to determine the applicability of regulatory limitations prior to use.*

## 2. Referenced Documents

### 2.1 ASTM Standards:<sup>2</sup>

**D3787** Test Method for Bursting Strength of Textiles—Constant-Rate-of-Traversal (CRT) Ball Burst Test

**D5034** Test Method for Breaking Strength and Elongation of Textile Fabrics (Grab Test)

**F1908** Guide for Fences for Residential Outdoor Swimming Pools, Hot Tubs, and Spas

**G154** Practice for Operating Fluorescent Light Apparatus for UV Exposure of Nonmetallic Materials

### 2.2 ANSI Standards:<sup>3</sup>

**ANSI Z97.1** Glazing Materials Used in Buildings, Safety Performance Specifications and Methods of Test

**ANSI Z535.4** Product Safety Signs and Labels

### 2.3 ANSI/NSPI Standard:<sup>3</sup>

**ANSI/NSPI-8** Standard for Model Barrier Code for Residential Swimming Pools

<sup>1</sup> This specification is under the jurisdiction of ASTM Committee F15 on Consumer Products and is the direct responsibility of Subcommittee F15.49 on Pool Safety Standards.

Current edition approved Jan. 1, 2005. Published January 2005. DOI: 10.1520/F2286-05.

<sup>2</sup> For referenced ASTM standards, visit the ASTM website, [www.astm.org](http://www.astm.org), or contact ASTM Customer Service at [service@astm.org](mailto:service@astm.org). For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

<sup>3</sup> Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036.

## 3. Terminology

### 3.1 Definitions:

3.1.1 See ANSI/NSPI-8 and Guide F1908 for specific terms.

### 3.2 Definitions of Terms Specific to This Standard:

3.2.1 *grade, n*—surfaces including concrete, brick, tile, wood, metal, or similar rigid surface used as foundation for mesh safety barriers.

3.2.2 *mesh safety barrier, n*—barrier composed of fabric mesh, support posts, hardware, and other assembly components.

## 4. Design and Performance Requirements

4.1 The top of a fence or wall used as a barrier shall be a minimum of 48 in. (1.2 m) above the grade adjacent to the exterior side of the barrier.

4.2 Distance between vertical support poles and attached mesh, along with other manufactured factors, shall be so designed and fabricated to hinder children's ability to climb.

4.3 Decorative details, if provided or added, shall not afford the ability of children to climb the mesh safety barrier.

4.4 When a hinged gate is used in addition to, or as part of the mesh safety barrier, the gate shall be self-closing, self-latching, accommodate a locking device and open outward from the pool, spa, or hot tub. The self-latching and lockable devices for gates shall be located at a minimum height of 54 in. (1.37 m) above grade and be mounted on the outside of the gate. An additional support or plate may be necessary to raise the device to 54 in. (1.37 m).

NOTE 1—Hinged gates in accordance with 4.4 are recommended for use with removable mesh fencing for swimming pools, hot tubs, and spas.

4.5 There shall be a clear zone of at least 20 in. (50 cm) between the barrier and pool/spa/hot tub.

4.6 The fence shall have at least 40 % open space to allow visibility from outside to inside of the pool area.

NOTE 2—The "open space" is calculated by using total area and subtracting the area of opaque supports and mesh.

4.7 The mesh safety barrier shall be removable when desired.