



Designation: F1918 – 21

Standard Safety Performance Specification for Soft Contained Play Equipment¹

This standard is issued under the fixed designation F1918; 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 reappraisal. A superscript epsilon (ε) indicates an editorial change since the last revision or reappraisal.

1. Scope

1.1 This safety performance specification provides safety and performance standards for soft contained play equipment. Its purpose is to reduce the potential for life-threatening and debilitating injuries.

1.2 The range of users encompassed by this safety performance specification is the 5th percentile 2 year old to the 95th percentile 12 year old.

1.3 Public playground equipment, home playground equipment, sports equipment, amusement rides, fitness equipment not part of the play system, water-related attractions and devices, and toys and juvenile products are not included in this specification.

1.4 This specification does not address accessibility, except as it pertains to safety issues not covered in The Americans With Disabilities Act Accessibility Guidelines (ADAAG).²

1.5 This safety performance specification includes the following sections:

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1.6 *This international standard was developed in accordance with internationally recognized principles on standard-*

ization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.

2. Referenced Documents

2.1 ASTM Standards:³

- E648 Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source
- F1077 Guide for Selection of Committee F16 Fastener Specifications (Withdrawn 2014)⁴
- F1292 Specification for Impact Attenuation of Surfacing Materials Within the Use Zone of Playground Equipment
- F1487 Consumer Safety Performance Specification for Playground Equipment for Public Use

2.2 Federal Standards:⁵

- 16 CFR Part 1303 Ban of Lead-Containing Paint and Certain Consumer Products Bearing Lead-Containing Paint
- 16 CFR 1500 Hazardous Substances Act Regulations, including Sections:
 - 1500.48 Technical Requirements for determining a Sharp Point in Toys and other Articles Intended for Use by Children Under 8 Years of Age.
 - 1500.49 Technical Requirements for Determining a Sharp Metal or Glass Edge in Toys and Other Articles Intended for Use by Children Under 8 Years of Age.
- 16 CFR Section 1501 Method for Identifying Toys and Other Articles Intended for Use by Children Under 3 Years of Age Which Present Choking, Aspiration or Ingestion Hazards Because of Small Parts
- Americans With Disabilities Act, Public Law 101–336:
 - 28 CFR 35 Title II, Subtitle A
 - 28 CFR 36 Title III, Appendix A
- 36 CFR Part 1191 Americans with Disabilities Act Accessibility Guidelines (ADAAG)

¹ This safety performance specification is under the jurisdiction of ASTM Committee F15 on Consumer Products and is the direct responsibility of Subcommittee F15.36 on Soft-Contained Play Systems.

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² More information on federal requirements for play equipment accessibility may be obtained from the Office of Technical and Information Services, Architectural and Transportation Barriers Compliance Board, 1331 F Street, NW, Suite 1000, Washington, DC 20004-1111 or at www.access-board.gov/play/finalrule.htm.

³ 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.

⁴ The last approved version of this historical standard is referenced on www.astm.org.

⁵ *Code of Federal Regulations*, available from U.S. Government Printing Office, Washington, DC 20402.

2.3 Other Standards:

UL Standard 94 Test for Flammability of Plastic Materials for Parts, Devices, and Appliances

UL Standard 1975 Fire Tests for Foamed Plastics Used for Decorative Purposes

NFPA 101 Life Safety Code

NFPA 701 Standard Methods of Fire Tests for Flame Propagation of Textiles and Films

National Electrical Code (NEC)

California Technical Bulletin 117

3. Terminology

3.1 Definitions:

3.1.1 *accessible*, *adj*—relating to a part or portion of the play system that is (1) capable of being contacted by any body part, or (2) available to and usable by persons with disabilities.

3.1.2 *air filled device*, *n*—a play activity which allows the user to bounce upon an inflated structure within soft contained play equipment.

3.1.3 *alternative means of hand support*, *n*—netting or other material that follows the path of access or egress, that, when grasped, provides balance and support in maintaining a specific body posture.

3.1.4 *ball pool*, *n*—any contained area with loose balls for the purpose of play or transition.

3.1.5 *barrier; protective*, *n*—an enclosing device that is intended to prevent both inadvertent and deliberate attempts to pass through the device.

3.1.6 *climber*, *n*—any component with the purpose of ascending or descending transition.

3.1.7 *completely bounded non-rigid opening*, *n*—any opening in SCPE that is totally enclosed by flexible boundaries which can deform or deflect during normal use (for example, the openings in a flexible net or lattice of webbing).

3.1.8 *completely bounded opening*, *n*—any opening in SCPE that is totally enclosed by boundaries on all sides so that the perimeter of the opening is continuous.

3.1.9 *component*, *n*—a part of a play system, any portion thereof that generates specific activity and does not stand alone.

3.1.10 *containment wall*, *n*—vertical part of the SCPE, usually made up of netting, mesh or paneling, which serves to enclose the SCPE.

3.1.11 *designated play surface*, *n*—any elevated surface for standing, walking, sitting or climbing; or flat surface larger than 2 in. (50 mm) wide by 2 in. (50 mm) long having less than a 30° angle from horizontal.

3.1.12 *emergency access/egress pathway*, *n*—a clear and unencumbered path which leads directly into or out of the play equipment in a continuous manner.

3.1.13 *entanglement*, *n*—a condition in which the user's clothing or something around the user's neck becomes caught or entwined on a component of playground equipment.

3.1.14 *fabric, mesh*, *n*—a woven fabric with a permeable network made from interlacing threads or mono filament fibers.

3.1.15 *fabric, solid*, *n*—a coated or laminated closed weave fabric.

3.1.16 *fall height*, *n*—the vertical distance between a designated play surface and the protective surfacing beneath it.

3.1.17 *flexible component*, *n*—any part of the SCPE that temporarily changes its shape when in use; examples include the tire net, the cargo net, and the log bridge.

3.1.18 *netting*, *n*—an open work fabric made of threads, cords, or mono filament fibers woven or knotted together at regular intervals.

3.1.19 *net, webbing*, *n*—a lattice of webbing sewn or otherwise affixed together at overlapping conjunctions.

3.1.20 *partially bounded opening*, *n*—any opening in SCPE that is not totally enclosed by boundaries on all sides so that the perimeter of the opening is discontinuous.

3.1.21 *platform*, *n*—a flat surface, intended for more than one user to stand upon, and upon which the user can move freely.

3.1.22 *play area*, *n*—a designated space intended for children's play.

3.1.23 *play opportunity*, *n*—any piece of equipment intended to generate specific recreational and/or learning activity.

3.1.24 *preventive maintenance*, *n*—a planned program of inspections and maintenance intended to keep equipment functioning properly and to forestall equipment failures.

3.1.25 *projection*, *n*—a condition which, due to its physical nature, must be tested to requirements of this standard to determine whether it is a protrusion or an entanglement hazard or both.

3.1.26 *protective surfacing*, *n*—surfacing material(s) to be used within the use zone of SCPE.

3.1.27 *protrusion*, *n*—a projection which, when tested in accordance with requirements of this standard, is found to be a hazard having the potential to cause serious bodily injury to a user who impacts it.

3.1.28 *slide exit region*, *n*—the lower end of a slide intended to slow the user before exiting.

3.1.29 *slide use zone*, *n*—the area immediately adjacent to accessible parts of the slide that is designated for circulation and on the surface of which a user would land when falling from or exiting the slide.

3.1.30 *soft contained play, equipment (SCPE)*, *n*—a play structure made up of one or more components where the user enters a fully enclosed play environment that utilizes pliable material(s) (for example, plastic, netting, or fabric).

3.1.31 *stair*, *n*—device having a slope of 50° or less from a horizontal plane and consisting of a series of steps that can be used for ascending and descending.

3.1.32 *step*, *n*—horizontal flat crosspiece of a ladder or of a stair used primarily as a foot support.

3.1.33 *upper body equipment*, *n*—equipment intended to be grasped by the user's hands and maneuvered upon using only the hands and arms.