

Subpart A—The Standard

AUTHORITY: Sec. 429, Pub. L. 105–276; Sec. 4, 67 Stat. 112, as amended, 81 Stat. 569–570; 15 U.S.C. 1193.

§ 1616.1 Scope and application.

(a) This Standard provides a test method to determine the flammability of children's sleepwear, sizes 7 through 14 and fabric or related material intended or promoted for use in such children's sleepwear.

(b) All sleepwear items as defined in § 1616.2(c), are subject to the requirements of this Standard.

(c) Children's sleepwear items which meet all the requirements of the Standard for the Flammability of Children's Sleepwear: Sizes 0 through 6X (FF 3–71) (subpart A of part 1615 of this chapter) are in compliance with this Standard. FF 3–71 was issued July 29, 1971 (36 FR 14062), and amended July 21, 1972 (37 FR 14624).

(d) As used in this Standard, *pass* and *fail* refer to the test criteria for specimens while *accept* and *reject* refer to the acceptance or rejection of a production unit under the sampling plan.

(e) The flammability standards for clothing textiles and vinyl plastic film, parts 1610 and 1611 of this chapter, are superseded by this part 1616 insofar as they apply to items defined in § 1616.2(c).

§ 1616.2 Definitions.

In addition to the definitions given in section 2 of the Flammable Fabrics Act, as amended (15 U.S.C. 1191), the following definitions apply for purposes of this Standard:

(a) Children's sleepwear means any product of wearing apparel size 7 through 14, such as nightgowns, pajamas, or similar or related items, such as robes, intended to be worn primarily for sleeping or activities related to sleeping, except:

(1) Diapers and underwear; and

(2) "Tight-fitting garments" as defined by section 1616.2(m), below.

(b) *Sizes 7 through 14* means the sizes defined as 7 through 14 in Department of Commerce Voluntary Product Standards PS 54–72 and PS 36–70, previously identified as Commercial Standards, CS 153–48, "Body Measure-

ments for the Sizing of Girls' Apparel" and CS 155–50, "Body Measurements for the Sizing of Boys' Apparel", respectively.¹

(c) *Item* means any product of children's sleepwear or any fabric or related material intended or promoted for use in children's sleepwear.

(d) *Trim* means decorative materials, such as ribbons, laces, embroidery, or ornaments. This definition does not include (1) individual pieces less than 2 inches in their longest dimension, provided that such pieces do not constitute or cover in aggregate a total of more than 20 square inches of the item or (2) functional materials (findings), such as zippers, buttons or elastic bands, used in the construction of garments.

(e) *Test criteria* means the average char length and the maximum char length which a sample of specimen may exhibit in order to pass an individual test.

(f) *Char length* means the distance from the original lower edge of the specimen exposed to the flame in accordance with the procedure specified in § 1616.5 *Test procedure* to the end of the tear or void in the charred, burned, or damaged area, the tear being made in accordance with the procedure specified in § 1615.5(c)(2) *Specimen burning and evaluation*.

(g) *Afterglow* means the continuation of glowing of parts of a specimen after flaming has ceased.

(h) *Fabric piece* (piece) means a continuous, unseamed length of fabric, one or more of which make up a unit.

(i) *Fabric production unit* (unit) means any quantity of finished fabric up to 4,600 linear m. (5,000 linear yds.) for Normal Sampling or 9,200 linear m. (10,000 linear yds.) for Reduced Sampling which has a specific identity that remains unchanged throughout the unit except for color or print pattern as specified in § 1616.4(a). For purposes of this definition, finished fabric means

¹Copies available from the National Technical Information Service, 5285 Port Royal Street, Springfield VA 22151. The ordering number for PS 54–72 (CS 153–48), on girls' apparel sizing, is COM 73–50603; the ordering number for PS 36–70 (CS 155–50), on boys' apparel sizing, is PB 86125648.

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fabric in its final form after completing its last processing step as a fabric except for slitting.

(j) *Garment production unit* (unit) means any quantity of finished garments up to 500 dozen which have a specific identity that remains unchanged throughout the unit except for size, trim, findings, color, and print patterns as specified in §1616.4(a).

(k) *Sample* means five test specimens.

(1) *Specimen* means an $8.9\pm0.5 \times 25.4\pm0.5$ cm. ($3.5\pm0.2 \times 10\pm0.2$ in.) section of fabric. For garment testing, the specimen will include a seam or trim.

(m) *Tight-fitting garment* means a garment which:

(1)(i) In each of the sizes listed below does not exceed the maximum dimension specified below for the chest, waist, seat, upper arm, thigh, wrist, or ankle:

	Chest	Waist	Seat	Upper arm	Thigh	Wrist	Ankle
Size 7 Boys ¹							
Maximum dimension:							
Centimeters	63.5	58.4	66	18.7	37.2	13.0	18.7
(inches)	(25)	(23)	(26)	(7 ³ / ₈)	(14 ⁵ / ₈)	(5 ¹ / ₈)	(7 ³ / ₈)
Size 7 Girls							
Maximum dimension:							
Centimeters	63.5	58.4	67.3	18.7	38.7	13.0	18.7
(inches)	(25)	(23)	(26 ¹ / ₂)	(7 ³ / ₈)	(15 ¹ / ₄)	(5 ¹ / ₈)	(7 ³ / ₈)
Size 8 Boys ¹							
Maximum dimension:							
Centimeters	66	59.7	67.3	19.4	38.4	13.3	19.1
(inches)	(26)	(23 ¹ / ₂)	(26 ¹ / ₂)	(7 ⁷ / ₈)	(15 ⁵ / ₈)	(5 ³ / ₄)	(7 ¹ / ₂)
Size 8 Girls							
Maximum dimension:							
Centimeters	66	59.7	71.1	19.4	41.3	13.3	19.1
(inches)	(26)	(23 ¹ / ₂)	(28)	(7 ⁷ / ₈)	(16 ¹ / ₄)	(5 ³ / ₄)	(7 ¹ / ₂)
Size 9 Boys ¹							
Maximum dimension:							
Centimeters	68.6	61.0	69.2	20	39.7	13.7	19.4
(inches)	(27)	(24)	(27 ¹ / ₄)	(7 ⁷ / ₈)	(15 ⁵ / ₈)	(5 ³ / ₈)	(7 ⁵ / ₈)
Size 9 Girls							
Maximum dimension:							
Centimeters	68.6	61.0	73.7	20	42.6	13.7	19.4
(inches)	(27)	(24)	(29)	(7 ⁷ / ₈)	(16 ³ / ₄)	(5 ³ / ₈)	(7 ⁵ / ₈)
Size 10 Boys ¹							
Maximum dimension:							
Centimeters	71.1	62.2	71.1	20.6	41.0	14	19.7
(inches)	(28)	(24 ¹ / ₂)	(28)	(8 ¹ / ₈)	(16 ⁵ / ₈)	(5 ¹ / ₂)	(7 ³ / ₄)
Size 10 Girls							
Maximum dimension:							
Centimeters	71.1	62.2	76.2	20.6	43.8	14	19.7
(inches)	(28)	(24 ¹ / ₂)	(30)	(8 ¹ / ₈)	(17 ¹ / ₄)	(5 ¹ / ₂)	(7 ³ / ₄)
Size 11 Boys ¹							
Maximum dimension:							
Centimeters	73.7	63.5	73.7	21	42.2	14.3	20
(inches)	(29)	(25)	(29)	(8 ¹ / ₄)	(16 ⁵ / ₈)	(5 ⁵ / ₈)	(7 ⁷ / ₈)
Size 11 Girls							
Maximum dimension:							
Centimeters	73.7	63.5	78.7	21	45.1	14.3	20
(inches)	(29)	(25)	(31)	(8 ¹ / ₄)	(17 ³ / ₄)	(5 ⁵ / ₈)	(7 ⁷ / ₈)
Size 12 Boys ¹							
Maximum dimension:							
Centimeters	76.2	64.8	76.2	21.6	43.5	14.6	20.3
(inches)	(30)	(25 ¹ / ₂)	(30)	(8 ¹ / ₂)	(17 ⁵ / ₈)	(5 ³ / ₄)	(8)
Size 12 Girls							
Maximum dimension:							
Centimeters	76.2	64.8	81.3	21.6	46.7	14.6	20.3
(inches)	(30)	(25 ¹ / ₂)	(32)	(8 ¹ / ₂)	(18 ¹ / ₂)	(5 ³ / ₄)	(8)

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	Chest	Waist	Seat	Upper arm	Thigh	Wrist	Ankle
Size 13 Boys¹							
Maximum dimension:							
Centimeters	78.7	66	78.7	22.2	44.8	14.9	20.6
(inches)	(31)	(26)	(31)	(8¾)	(17½)	(5⅞)	(8⅞)
Size 13 Girls							
Maximum dimension:							
Centimeters	78.7	66	83.8	22.2	47.6	14.9	20.6
(inches)	(31)	(26)	(33)	(8¾)	(18¾)	(5⅞)	(8⅞)
Size 14 Boys¹							
Maximum dimension:							
Centimeters	81.3	67.3	81.3	22.9	46	15.2	21
(inches)	(32)	(26½)	(32)	(9)	(18½)	(6)	(8¼)
Size 14 Girls							
Maximum dimension:							
Centimeters	81.3	67.3	86.4	22.9	49.5	15.2	21
(inches)	(32)	(26½)	(34)	(9)	(19½)	(6)	(8¼)

¹ Garments not explicitly labeled and promoted for wear by girls must not exceed these maximum dimensions.

(ii) Note: Measure the dimensions on the front of the garment. Lay garment, right side out, on a flat, horizontal surface. Smooth out wrinkles. Measure distances as specified below and multiply them by two. Measurements should be equal to or less than the maximum dimensions given in the standards.

(A) Chest—measure distance from arm pit to arm pit (A to B) as in Diagram 1.

(B) Waist—See Diagram 1. *One-piece garment*, measure at the narrowest location between arm pits and crotch (C

to D). *Two-piece garment*, measure width at both the bottom/sweep of the upper piece (C to D) and, as in Diagram 3, the top of the lower piece (C to D).

(C) Wrist—measure the width of the end of the sleeve (E to F), if intended to extend to the wrist, as in Diagram 1.

(D) Upper arm—draw a straight line from waist/sweep D through arm pit B to G. Measure down the sleeve fold from G to H. Refer to table below for G to H distances for each size. Measure the upper arm of the garment (perpendicular to the fold) from H to I as shown in Diagram 1.

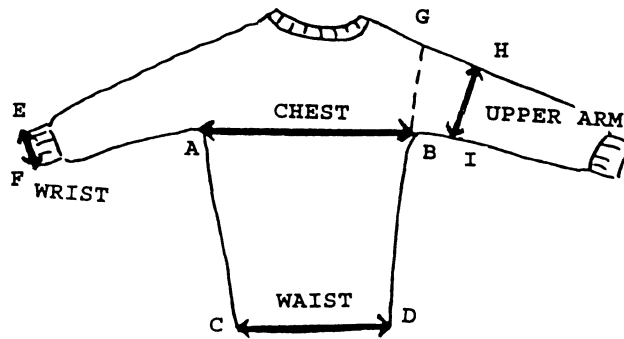


Diagram 1

DISTANCE FROM SHOULDER (G) TO (H) FOR UPPER ARM MEASUREMENT FOR SIZES 7 THROUGH 14

7	8	9	10	11	12	13	14
11.4 cm 4½"	11.7 cm 4⅝"	11.9 cm 4¾"	12.5 cm 4⅞"	12.8 cm 5"	13.1 cm 5⅛"	13.7 cm 5⅜"	14.2 cm 5½"

(E) Seat—Fold the front of the pant in half to find the bottom of the crotch at J as in Diagram 2. The crotch seam and inseam intersect at J. Mark point K on the crotch seam at 4 inches above and perpendicular to the bottom of the crotch. Unfold the garment as in Diagram 3. Measure the seat from L to M through K as shown.

(F) Thigh—measure from the bottom of the crotch (J) 1 inch down the inseam to N as in Diagram 2. Unfold the garment and measure the thigh from the inseam at N to O as shown in Diagram 3.

(G) Ankle—measure the width of the end of the leg (P to Q), if intended to extend to the ankle, as in Diagram 3.

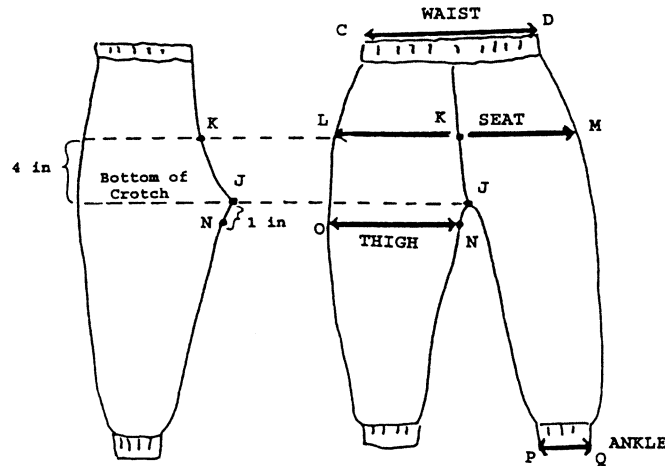


Diagram 2

Diagram 3

(2) Has no item of fabric, ornamentation or trim, such as lace, appliques, or ribbon, which extends more than 6 millimeters (¼ inch) from the point of attachment to the outer surface of the garment;

(3) Has sleeves which do not exceed the maximum dimension for the upper arm at any point between the upper arm and the wrist, and which diminish in width gradually from the top of the shoulder (point G in Diagram 1) to the wrist;

(4) Has legs which do not exceed the maximum dimension for the thigh at any point between the thigh and the ankle, and which diminish gradually in width between the thigh and the ankle;

(5) In the case of a one-piece garment, has a width which does not exceed the maximum dimension for the chest at any point between the chest and the waist and which diminishes gradually from the chest to the waist; and has a width which does not exceed the maximum dimension for the seat at

any point between the seat and the waist and which diminishes gradually from the seat to the waist;

(6) In the case of a two-piece garment, has an upper piece with a width which does not exceed the maximum distance for the chest at any point between the chest and the bottom of that piece and which diminishes gradually from the chest to the bottom of that piece; in the case of an upper piece with fastenings, has the lowest fastening within 15 centimeters (6 inches) of the bottom of that piece;

(7) In the case of a two-piece garment, has a lower piece with a width which does not exceed the maximum dimension for the seat at any point between the seat and the top of the lower piece and which diminishes gradually from the seat to the top of that piece;

(8) Complies with all applicable requirements of the Standard for the Flammability of Clothing Textiles (16 CFR part 1610) and the Standard for the

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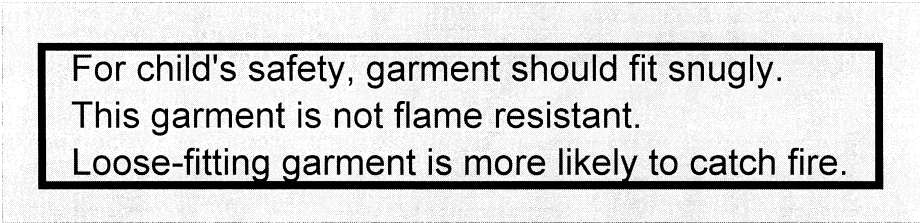
Flammability of Vinyl Plastic Film (16 CFR part 1611); and

(9) Bears a label stating the size of the garment; for example "Size 7." If the label is not visible to the consumer when the garment is offered for sale at retail, the garment size must appear legibly on the package of the garment.

Effective date: These amendments shall become effective on January 1, 1997, and shall be applicable to garments which are introduced into commerce on or after that date.

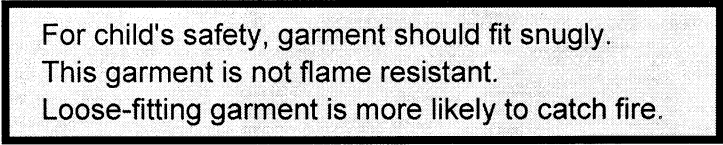
(10)(i) *Hangtags.* Bears a hangtag as shown following this paragraph stating "For child's safety, garment should fit snugly. This garment is not flame resistant. Loose-fitting garment is more likely to catch fire." The hangtag must measure 1½" × 6¼". The text must be

enclosed in a text box that measures 1" × 5¾" and must be in 18 point Arial/ Helvetica font. The hangtag must have a yellow background and black lettering. The color yellow must meet the specifications for Standard Safety Yellow (Hue 5.OY; Value/Chroma 8.0/12) as described in American National Standard ANSI Z535.1-1998, Safety Color Code, p.6, under Munsell Notation.² One side of the hangtag must display only this message. The reverse side of the hangtag may display sizing information, but otherwise must be blank. The text must not be obscured by the hole provided for attaching the hangtag to the garment. The hangtag must be prominently displayed on the garment.



(ii) *Packages.* If the garments are sold in packages, the package must have a label as shown following this paragraph with the same language that would appear on the hangtag. The label must have a text box that measures ¾ × 3¾. The text must be 11 point Arial/

Helvetica in black lettering against a yellow background. The packages must be prominently, conspicuously, and legibly labeled with the required message. The package label may be adhesive.



²ANSI Z535.1-1998, Standard for Safety Color Code, p.6, published by National Electrical Manufacturers Association is incorporated by reference. Copies of this document are available from the National Electrical Manufacturers Association, 1300 N. 17th Street, Suite 1847, Rosslyn, Virginia 22209. This document is also available for inspection at the National Archives and

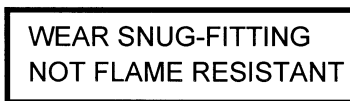
Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html. The incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51.

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(11) Bears a label as shown following this paragraph stating “Wear Snug-fitting, Not Flame Resistant.” The text must be printed on the front of the sizing label located on the center back of the garment and must be immediately below the size designation. The

text must be a minimum of 5 point sans serif font in all capital letters and must be set apart from other label text by a line border. The text must contrast with the background color of the label. The label must not be covered by any other label or tag.



Example in 10 pt Arial font

[40 FR 59917, Dec. 30, 1975, as amended at 50 FR 53307, Dec. 31, 1985; 61 FR 47646, Sept. 9, 1996; 64 FR 2841, Jan. 19, 1999; 64 FR 34535, June 28, 1999; 64 FR 48705, Sept. 8, 1999; 64 FR 61021, Nov. 9, 1999]

§ 1616.3 General requirements.

(a) *Summary of test method.* Conditioned specimens are suspended one at a time vertically in holders in a prescribed cabinet and subjected to a standard flame along their bottom edges for a specified time under controlled conditions. The char lengths are recorded.

(b) *Test criteria.* The test criteria when the testing is done in accordance with § 1616.4 *Sampling and acceptance procedures* and § 1616.5 *Test procedures* are:

(1) *Average char length.* The average char length of five specimens shall not exceed 17.8 cm. (7.0 in.).

(2) *Full-specimen burn.* No individual specimen shall have a char length of 25.4 ± 0.5 cm. (10 ± 0.2 in.).

(c) Details of the number of specimens which must meet the above test criteria for unit acceptance is specified in § 1616.4.

§ 1616.4 Sampling and acceptance procedures.

(a) *General.* (1) The test criteria of § 1616.3(b) shall be used in conjunction with the following fabric and garment sampling plan. The Consumer Product Safety Commission may consider and approve other sampling plans that provide at least the equivalent level of fire

safety to the consumer, provided such alternate sampling plans have operating characteristics such that the probability of unit acceptance at any percentage defective does not exceed the corresponding probability of unit acceptance of the following sampling plan in the region of the latter's operating characteristic curves that lies between 5 and 95 percent acceptance probability. Alternate sampling plans approved for one manufacturer may be used by other manufacturers without prior Consumer Product Safety Commission approval.

(2) Different colors or different print patterns of the same fabric may be included in a single fabric or garment production unit, provided such colors or print patterns demonstrate char lengths that are not significantly different from each other as determined by previous testing of at least three samples from each color or print pattern to be included in the unit.

(3) Garments with different trim and findings may be included in a single garment production unit provided the other garment characteristics are identical except for size, color, and print pattern.

(4) For fabrics whose flammability characteristics are not dependent on chemical additives or chemical reactants to polymer, fiber, yarns, or fabrics, the laundering requirement of § 1616.5(c)(4) is met on subsequent fabric production units if results of testing an initial fabric production unit demonstrate acceptability according to the