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Standard Consumer Safety Specification for Sling Carriers¹

This standard is issued under the fixed designation F2907; 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.

INTRODUCTION

This consumer safety specification addresses incidents associated with sling carriers as identified by the U.S. Consumer Product Safety Commission (CPSC). In response to incident data compiled by the CPSC, this specification attempts to minimize the following hazards: fall hazards, suffocation hazards, and deficiency of consumer education regarding product use. This specification is intended to cover normal use and reasonably foreseeable misuse or abuse of the product(s).

This specification is written within the current state-of-the-art of sling carrier technology and will be updated whenever substantive information becomes available that necessitates additional requirements or justifies the revision of existing requirements.

1. Scope

- 1.1 This consumer safety specification establishes performance requirements, test methods and marking requirements to promote safe use of sling carriers.
- 1.2 This consumer safety specification is intended to minimize the risk of injury to an occupant from the normal use and reasonably foreseeable misuse of products.
- 1.3 For purposes of definition, a sling carrier is a product of fabric or sewn fabric construction, which is designed to contain up to two (2) children in an upright or reclined position while being supported by the caregiver's torso. Sling carriers are normally used from full-term birth to 35 lb (15.9 kg) unless the manufacturer indicates that a higher weight limit is allowed.

Note 1—Slings consist of a variety of unstructured designs ranging from a hammock-shaped product suspended on the caregiver's upper torso to a long length of material wrapped around the caregiver's body.

- 1.4 The sling carrier is normally "worn" by the caregiver, and thus the child is supported from one or both shoulders of the caregiver. These products are worn on the front, hip or back of the caregiver, with the child either facing towards or away from the caregiver or reclined on the front only of the caregiver.
- 1.5 No sling carrier produced after the approval date of this consumer safety specification shall, either by label or other

means, indicate compliance with the specification unless it complies with all of the requirements contained herein.

- 1.6 This consumer safety specification is not intended to address incidents and injuries resulting from the interaction of other persons or objects with the caregiver and child while the sling carrier is in use.
- 1.7 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.
- 1.8 The following precautionary caveat pertains only to the test methods portion, Section 7, 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, health, and environmental practices and determine the applicability of regulatory limitations prior to use.
- 1.9 This international standard was developed in accordance with internationally recognized principles on standardization 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:²

D3359 Test Methods for Rating Adhesion by Tape Test

¹ This consumer safety specification is under the jurisdiction of ASTM Committee F15 on Consumer Products and is the direct responsibility of Subcommittee F15.21 on Infant Carriers, Bouncers and Baby Swings.

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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.



- F963 Consumer Safety Specification for Toy Safety 2.2 Federal Regulations:³
- 16 CFR 1303 Ban of Lead-Containing Paint and Certain Consumer Product Bearing Lead-Containing Paint
- 16 CFR 1500.3(c)(6)(vi) Definition of "Flammable Solid"
- 16 CFR 1500.48 Technical Requirements for Determining a Sharp Point in Toys or Other Articles Intended for Use By Children Under Eight Years of Age
- 16 CFR 1500.49 Technical Requirements for Determining a Sharp Metal or Glass Edge in Toys or Other Articles Intended for Use By Children Under Eight Years of Age
- 16 CFR 1501 Method for Identifying Toys and Other Articles Intended for Use by Children Under Three Years of Age Which Present Choking, Aspiration or Ingestion Hazards Because of Small Parts
- 16 CFR 1610 Standard for the Flammability of Clothing Textiles
- 2.3 ANSI Standards:⁴

ANSI Z535.1 Safety Colors

ANSI Z535.4 Product Safety Signs and Labels

ANSI Z535.6 Product Safety Information in Product Manuals, Instructions, and Other Collateral Materials

3. Terminology

- 3.1 Definitions of Terms Specific to This Standard:
- 3.1.1 attachment system, n—fastenings, straps, hoops, buckles, or similar parts which are fitted to the sling carrier for the purpose of securing the article to the caregiver's torso.
- 3.1.2 conspicuous, adj—visible when the product is in the manufacturer's recommended carrying position to a caregiver who is placing the occupant in the sling carrier or when the caregiver places the product on his or her body.
- 3.1.3 *dynamic load*, *n*—application of impulsive force through free fall of a weight.

 ASTM F2
- 3.1.4 *fabric*, *n*—any woven, knit, coated, laminated, extruded, or calendered flexible material that is intended to be sewn, welded, heat sealed, or glued together as an assembly.
- 3.1.5 full term infant, n—a baby born 38+ weeks after conception.
- 3.1.6 manufacturer's recommended carrying position(s), n—any carrying position that is presented as a normal, allowable, or acceptable configuration for use of the product by the manufacturer in any descriptive or instructional literature.
- 3.1.6.1 *Discussion*—This specifically excludes positions that the manufacturer shows in a like manner in its literature to be unacceptable, unsafe, or not recommended.
- 3.1.7 *non-paper label*, *n*—any label material (such as plastic or metal) that either will not tear without the aid of tools or tears, leaving a sharply defined edge.
- 3.1.8 *occupant*, *n*—individual who is placed or carried in the sling carrier in one of the manufacturer's recommended carrying positions in accordance with 1.4.
- ³ Available from U.S. Government Printing Office Superintendent of Documents, 732 N. Capitol St., NW, Mail Stop: SDE, Washington, DC 20401, http://www.access.gpo.gov.
- ⁴ Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036, http://www.ansi.org.

- 3.1.9 *paper label, n*—any label material which tears without the aid of tools and leaves a fibrous edge.
 - 3.1.10 *reclined*, *n*—any position other than upright.
- 3.1.11 *restraint system, n*—a means of securing the occupant in any of manufacturer's recommended carrying positions.
- 3.1.12 *ring sling, n*—a sling carrier constructed of a long, rectangular, oblong, or similarly shaped piece of fabric with two rings (usually either nylon or metal) attached to one end.
- 3.1.12.1 *Discussion*—The end of the fabric without rings is threaded through and between rings to make a pouch for the baby and a tail of fabric. The rings bear the weight of the baby in the sling, and the caregiver can adjust the sling through the rings.
- 3.1.13 *seam*, *n*—a place where fabric components are joined, by means such as sewing, welding, heat sealing, or gluing.
- 3.1.14 *static load*, *n*—vertically downward load applied by weights or other means.
- 3.1.15 substantially similar carrying position, n—carrying positions where the sling fabric orientation does not vary regardless of the direction the baby is facing relative to the wearer, or regardless of the positioning of the product to the wearer.
- 3.1.16 *support area(s)*, *n*—the area(s) in the sling carrier where the occupant's weight rests in the product.

4. Calibration and Standardization

- 4.1 The product shall be completely assembled in accordance with the manufacturer's instructions.
- 4.2 No testing shall be conducted within 48 h of manufacture.
- 4.3 The product to be tested shall be at an ambient temperature of $73^{\circ}F \pm 9^{\circ}F$ ($23^{\circ}C \pm 5^{\circ}C$) for at least one hour before testing. All testing shall be conducted in this temperature range.
- 4.4 All testing required by this consumer safety specification shall be conducted on the same unit in the order presented in this specification, except where directly indicated.

5. General Requirements

- 5.1 Laundering—The sling shall be washed and dried twice in accordance with the manufacturer's instructions. Any resulting shrinkage shall not prevent any removable parts from being refitted without damaging the seams of the fabric and shall not impair the performance and use of the article. *This test will be the first test conducted on the fabric.*
- 5.2 Hazardous Sharp Points or Edges—There shall be no sharp points or edges as defined by 16 CFR 1500.48 and 16 CFR 1500.49 before and after testing.
- 5.3 *Small Parts*—There shall be no small parts as defined by 16 CFR 1501 before testing or liberated as a result of testing to this specification.
- 5.4 Lead in Paint—The paint or surface coating on the product shall comply with 16 CFR 1303.

- 5.5 *Wood Parts*—Prior to testing, any wooden parts shall be smooth and free of splinters.
- 5.6 Locking and Latching—Any product designed with a locking or latching attachment system must remain in the manufacturer's recommended carrying position before and after completion of all tests in this standard.
- 5.7 *Labeling*—Warning labels (whether paper or non-paper) shall be permanent when tested in accordance with 7.3.
- 5.7.1 Warning statements applied directly onto the surface of the product by hot stamping, heat transfer, printing, wood burning, and so forth shall be permanent when tested in accordance with 7.4.
- 5.7.2 Non-paper labels shall not liberate small parts when tested in accordance with 7.4.
- 5.8 *Openings*—Holes or slots that extend entirely through a wall section of any rigid material less than 0.375-in. (9.53-mm) thick and admit a 0.210-in. (5.33-mm) diameter rod shall also admit a 0.375-in. (9.53-mm) diameter rod. Holes or slots that are between 0.210 in. (5.33 mm) and 0.375 in. (9.53 mm) and have a wall thickness less than 0.375 in. (9.53 mm), but are

- limited in depth to 0.375 in. (9.53 mm) maximum by another rigid surface shall be permissible (see Fig. 1). The product shall be evaluated in all manufacturers' recommended carrying positions.
- 5.9 Scissoring, Shearing, and Pinching—The product, when in a manufacturer's recommended use position(s), shall be designed and constructed so as to prevent injury to the occupant from any scissoring, shearing, or pinching when members or components rotate about a common axis or fastening point, slide, pivot, fold, or otherwise move relative to one another. Scissoring, shearing, or pinching that may cause injury exists when the edges of any rigid parts admit a probe greater than 0.210 in. (5.33 mm) and less than 0.375 in. (9.53 mm) diameter at any accessible point throughout the range of motion of such parts.
- 5.10 *Monofilament Threads*—Monofilament threads shall not be used.
- 5.11 Flammability—There shall be no Class 2 or 3 fabrics used in the construction of a sling carrier when the product is evaluated against the requirements of 16 CFR 1610.

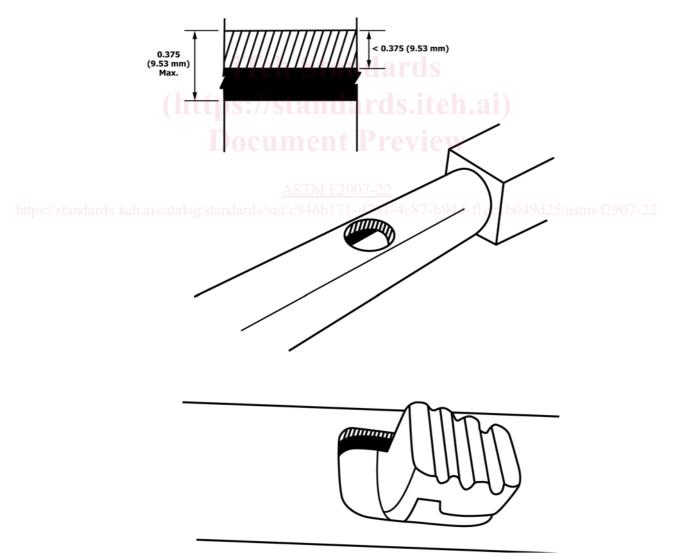


FIG. 1 Opening Example

5.11.1 If a sling carrier is incapable of being evaluated to the requirements of 16 CFR 1610 due to construction characteristics, the product shall not be flammable as defined under 16 CFR 1500.3(c)(6)(vi) when tested in accordance with Consumer Safety Specification F963, Annex 5.

6. Performance Requirements

- 6.1 Structural Integrity—At the conclusion of each test, there shall be no failures such as seam separation, fabric tears, permanent deformation, breakage or disengagement of attachment systems, or a hazardous condition as defined in 5.2 5.5, 5.8, or 5.9. Adjustable attachment systems of the sling carrier shall not slip more than 1 in. (25.44 mm) per element.
- 6.1.1 Static Load—The sling carrier shall meet the criteria in 6.1 when tested in accordance with 7.1.
- 6.1.2 *Dynamic Load*—The sling carrier shall meet the criteria in 6.1 when tested in accordance with 7.2.
- 6.2 *Restraint System*—If the manufacturer includes a restraint system on the product, each separate restraint system shall comply with the following:
- 6.2.1 The restraint system shall include both waist and crotch restraint, where the crotch restraint's use is mandatory when the waist restraint system is in use.
- 6.2.2 The anchorages for the restraint system shall not separate from their attachment points through normal use when tested in accordance with 7.6.

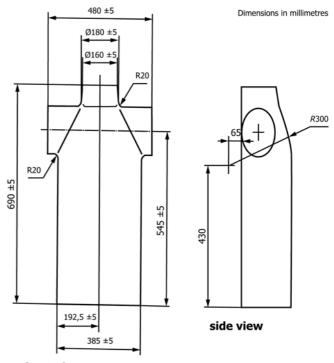
6.3 Occupant Retention:

- 6.3.1 *Ring Slings*—When tested in accordance with 7.5, after 100 cycles the maximum slippage of the attachment system shall be 3 in. (76.2 mm) and no part of the test mass shall pass below the bottom of the test torso.
- 6.3.2 *Products Other Than Ring Slings*—When tested in accordance with 7.5, after 100 cycles the maximum slippage of the attachment system and the restraint system (if applicable) shall be 1 in. (25 mm) and no part of the test mass shall pass below the bottom of the test torso.
- 6.3.3 When tested in accordance with 7.5, after the completion of each phase of the test, the attachment system and the restraint system (if applicable) shall not be released, there shall be no failures (as defined in 6.1), and no part of the test mass shall pass below the bottom of the test torso.

7. Test Methods

7.1 Static Load Test:

- 7.1.1 Fasten the sling carrier to a test torso (see Fig. 2) as directed in the instruction manual supplied with the product. If the sling carrier is manufactured in multiple sizes, the size that fits the test torso is the required size for the sample submission.
- 7.1.2 By some appropriate means, mark the position of the attachment system. If sling does not have any hardware and is fastened by means of fabric, mark the position on the fabric. This will be the start point for the remainder of the test.
- 7.1.3 Using a 6-in. (150-mm) standard weld cap (see Fig. 3), center a weight equal to three times the manufacturer's recommended maximum weight, or 60 lb (27.2 kg), whichever is greater, in the support area of the sling carrier. Include the weight of the weld cap in the total. Gradually apply the weight within a 5-s period and maintain for an additional 1 min.



front view

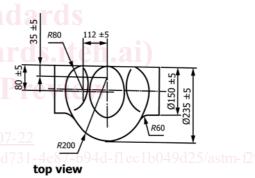


FIG. 2 Test Torso

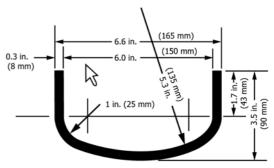


FIG. 3 Standard 6-in. (150-mm) Weld Cap

- 7.1.4 Mark and measure the amount of slippage in the attachment system. Evaluate results per requirements of 6.1.
- 7.1.5 If two occupants can be carried in any carrying position according to the manufacturer's instructions, the applicable weight in 7.1.3 shall be applied in both support areas of the sling carrier concurrently.

- 7.1.6 Repeat 7.1.1 7.1.5 for all manufacturer's recommended carrying positions.
 - 7.2 Dynamic Load Test:
- 7.2.1 Fasten the sling carrier to a test torso (see Fig. 2) as directed in the instruction manual supplied with the product. If the sling carrier is manufactured in multiple sizes, the size that fits the test torso is the required size for the sample submission.
 - 7.2.2 Single Occupant Products:
- 7.2.2.1 Determine the appropriate number of test cycles using Table 1 based on the number of separate manufacturer's recommended carrying positions.
- 7.2.2.2 Position a 6 in. to 8 in. diameter shot bag weighing 35 lb (15.9 kg) or a mass equal to the manufacturer's recommended maximum weight for the specific carrying position of the product, whichever is greater, a distance of 1 in. (25 mm) above the support area of the sling carrier.
- 7.2.2.3 Drop the weight onto the support area ten times with a cycle time of $4 \text{ s} \pm 1 \text{ s}$ per cycle to preset the attachment system.
- 7.2.2.4 By some appropriate means, mark the position of the attachment system. If the sling does not have any hardware and is fastened by means of fabric, mark the position of the fabric. This will be the start point for the remainder of the test.
- 7.2.2.5 Drop the weight onto the support area an additional X times with a cycle time of $4 \text{ s} \pm 1 \text{ s}$ per cycle.
- 7.2.2.6 Mark and measure the amount of slippage in the attachment system. Evaluate results per requirements of 6.1.
- 7.2.2.7 Repeat 7.2.2.2 7.2.2.6 for each separate carrying position.
 - 7.2.3 Two Occupant Products:
- 7.2.3.1 If two occupants can be carried in any carrying position according to the manufacturer's instructions, load one support area with the applicable static load as determined in 7.1.2. Repeat steps 7.2.2.1 7.2.2.6 in the other support area.
- 7.2.3.2 Repeat 7.2.3.1 with the static and dynamic static loads reversed in each support area. Note that weights for each support area may be different, and the applicable weight(s) shall be used.
- 7.2.3.3 Repeat 7.2.3.1 and 7.2.3.2 for each separate carrying position.
 - 7.3 Permanency of Labels and Warnings:
- 7.3.1 A paper label (excluding labels attached by a seam) shall be considered permanent if, during an attempt to remove it without the aid of tools or solvents, it cannot be removed, it tears into pieces upon removal, or such action damages the surface to which it is attached.

- 7.3.2 A non-paper label (excluding labels attached by a seam) shall be considered permanent if, during an attempt to remove it without the aid of tools or solvents, it cannot be removed or such action damages the surface to which it is attached.
- 7.3.3 A warning label attached by a seam shall be considered permanent if it does not detach when subjected to a 15 lbf (67 N) pull force applied in any direction most likely to cause failure using a 0.75 in. (19 mm) diameter clamp surface (see Fig. 4). Gradually apply the force over 5 s and maintain for an additional 10 s.
- 7.4 Adhesion Test for Warnings Applied Directly onto the Surface of the Product:
- 7.4.1 Apply the tape test defined in Test Method B of Test Methods D3359, eliminating parallel cuts.
- 7.4.2 Perform this test once in each different location where warnings are applied.
- 7.4.3 The warning statements will be considered permanent if the printing in the area tested is still legible and attached after being subjected to this test.
- 7.4.4 A non-paper label, during an attempt to remove it without the aid of tools or solvents, shall not fit entirely within the small parts cylinder defined in 16 CFR 1501 if it can be removed.
 - 7.5 Occupant Retention Test:
 - 7.5.1 Test Equipment:
- 7.5.1.1 Test Torso—A rigid test torso with dimensions as specified in Fig. 2 shall be clothed in a tight-fitting, thermal knit or waffle-weave, cotton or cotton/polyester undershirt or equivalent and fitted on a rigid plate. The plate shall be subjected to an alternating vertical sinusoidal movement through 4.75 in. \pm 0.25 in. at a frequency of 2 Hz (\pm 10 %).
- 7.5.1.2 *Test Masses*—Test Mass A is a bag filled with sand to a total mass of 20 lb, the shape and size of which are adjustable so that it can be firmly restrained by the sling carrier. This test mass is for use for testing sling carriers intended for children up to and including 20 lb.
- 7.5.1.3 Test Mass B is a bag filled with sand to a total mass of 35 lb or the manufacturer's recommended maximum weight (whichever is greater), the shape and size of which is adjustable so that it can be firmly restrained by the sling carrier. This test mass is used for testing sling carriers intended for children over 20 lb.
 - 7.5.2 Test Procedure—Single Occupant Products:
- 7.5.2.1 Place the sling on the test torso in accordance with the manufacturer's instructions.

TABLE 1 Test Cycles Based on Manufacturer's Recommended Carrying Positions

Manufacturer's recommended	Total number of cycles for each carrying	Cycles in initial slippage test	Remaining cycles
carrying positions ^A	position in the dynamic load test (7.2)	(7.5.2.7)	(7.5.2.9)
	and occupant retention test (7.5)		
1	1000	100	900
2	500	100	400
3	350	100	250

^A Those positions that are substantially similar in fabric position and loading patterns will count as one (1) position. A product for one occupant that may be worn on the front and back has two carrying positions. Products for up to two occupants that allow for different combinations of front/back carry positions shall all be considered separate carrying positions. The configuration where both children are carried on the front of the caregiver is considered one carrying position, and the configuration where one child is carried on the back and one child is carried on the front is considered a second carrying position.

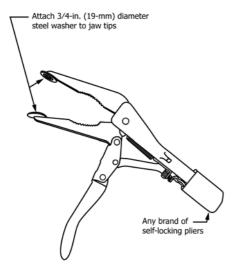


FIG. 4 Label Permanency Test Clamp

- 7.5.2.2 Determine the appropriate number of test cycles using Table 1 based on the number of separate manufacturer's recommended carrying positions.
- 7.5.2.3 Select either Test Mass A or Test Mass B as applicable to the manufacturer's recommended maximum occupant weight.
- 7.5.2.4 Gradually place the appropriate test mass into the sling carrier and firmly secure any restraint system (if applicable.)
 - 7.5.2.5 Conduct the test as specified in 7.5.1.1 for 10 cycles.
- 7.5.2.6 Mark all straps to enable measurement of slippage of straps in buckles or other devices.
- 7.5.2.7 Conduct the test as specified in 7.5.1.1 for 100 additional cycles.
- 7.5.2.8 Measure any slippage of straps in buckles or other devices.
- 7.5.2.9 Conduct the test as specified in 7.5.1.1 for the remaining cycles indicated in Table 1. The 10 preload cycles conducted in 7.5.2.5 shall not be counted in the total cycle count.
 - 7.5.2.10 Evaluate results per requirements of 6.3.3.
- 7.5.2.11 If the sling, according to manufacturer's instructions, has more than one separate carrying position, repeat the test for each separate carrying position.
 - 7.5.3 Test Procedure—Two Occupant Products:
- 7.5.3.1 Place the sling on the test torso in accordance with the manufacturer's instructions.
- 7.5.3.2 Determine the appropriate number of test cycles using Table 1 based on the number of separate manufacturer's recommended carrying positions.
- 7.5.3.3 Select either Test Masses A or Test Masses B as applicable to the manufacturer's recommended maximum occupant weight for each support area.
- 7.5.3.4 Gradually place the appropriate test masses into both of the sling carrier support areas and firmly secure any restraint systems (if applicable.)
 - 7.5.3.5 Conduct the test as specified in 7.5.1.1 for 10 cycles.
- 7.5.3.6 Mark all straps to enable measurement of slippage of straps in buckles or other devices.

- 7.5.3.7 Conduct the test as specified in 7.5.1.1 for 100 additional cycles.
- 7.5.3.8 Measure any slippage of straps in buckles or other devices.
- 7.5.3.9 Conduct the test as specified in 7.5.1.1 for the remaining cycles indicated in Table 1. The 10 preload cycles conducted in 7.5.3.5 shall not be counted in the total cycle count
 - 7.5.3.10 Evaluate results per requirements of 6.3.3.
- 7.5.3.11 If the sling, according to manufacturer's instructions, has more than one separate carrying position, repeat the test for each separate carrying position.

7.6 Restraint System:

- 7.6.1 Secure the sling carrier to a horizontal test plane so that it cannot move vertically or horizontally.
- 7.6.2 Apply a force of 45 lbf (200 N) to a single attachment point of the restraint system in the normal use direction(s) that stress would be applied to that attachment. Gradually apply the force within 5 s and maintain for an additional 10 s.
- 7.6.3 Place a CAMI Infant Dummy, Mark II, in the carrier with the restraint system adjusted in accordance with the manufacturer's instructions.
- 7.6.4 Apply a pull force of 45 lbf (200 N) horizontally on the approximate centerline of either leg of the dummy (at the ankle). Gradually apply the force within 5 s and maintain for an additional 10 s.
- 7.6.5 Repeat this procedure five times with a maximum interval of 5 s between tests.

8. Marking and Labeling

- 8.1 Each product and its retail package shall be permanently marked clearly and legibly to indicate the following:
- 8.1.1 The name, place of business (city, state, and mailing address, including zip code), and telephone number of the manufacturer, distributor, or seller.
- 8.1.2 A code mark or other means that identifies the date (month and year as a minimum) of manufacture.
- 8.1.3 Minimum and maximum recommended child's weight for each support area of the carrier.
- 8.1.4 The marking and labeling in 8.1.1 8.1.3 are not required on the retail package if they are on the product and are visible in their entirety through the retail package. When no retail packaging is used to enclose the product, the information provided on the product shall be used for determining compliance with 8.1.1 8.1.3. Cartons and other materials used exclusively for shipping the product are not considered retail packaging.
- 8.2 The marking and labeling on the product shall be permanent.
- 8.3 Any upholstery labeling required by law shall not be used to meet the requirements of this section.
 - 8.4 Warning Design for Product:
- 8.4.1 The warnings shall be easy to read and understand and be in the English language at a minimum.

- 8.4.2 Any marking or labeling provided in addition to those required by this section shall not contradict or confuse the meaning of the required information, or be otherwise misleading to the consumer.
 - 8.4.3 The warnings shall be conspicuous and permanent.
- 8.4.4 The warnings shall conform to ANSI Z535.4 2011, American National Standard for Product Safety Signs and Labels, sections 6.1–6.4, 7.2–7.6.3, and 8.1, with the following changes:
- 8.4.4.1 In sections 6.2.2, 7.3, 7.5, and 8.1.2, replace "should" with "shall."
- 8.4.4.2 In section 7.6.3, replace "should (when feasible)" with "shall."
- 8.4.4.3 Strike the word "safety" when used immediately before a color (e.g., replace "safety white" with "white").
- Note 2—For reference, ANSI Z535.1 American National Standard for Safety Colors provides a system for specifying safety colors.
- 8.4.5 The safety alert symbol and the signal word "WARN-ING" shall be at least 0.2 in. (5 mm) high. The remainder of the text shall be in characters whose upper case shall be at least 0.1 in. (2.5 mm), except where otherwise specified.
- Note 3—For improved warning readability, typefaces with large height-to-width ratios, which are commonly identified as "condensed," "compressed," "narrow," or similar should be avoided.
 - 8.4.6 Message Panel Text Layout:
- 8.4.6.1 The text shall be left-aligned, ragged-right for all but one-line text messages, which can be left-aligned or centered.
- Note 4—Left-aligned means that the text is aligned along the left margin, and, in the case of multiple columns of text, along the left side of each individual column. See Fig. X1.1 in the appendix for examples of left-aligned text.
- 8.4.6.2 The text in each column should be arranged in list or outline format, with precautionary (hazard avoidance) statements preceded by bullet points. Multiple precautionary statements shall be separated by bullet points if paragraph formatting is used.
- 8.5 Warning Statements—Each product shall have warning statements as follows:
- 8.5.1 The following warning statement shall be the first statement and shall be included exactly as stated below:

Failure to follow these warnings and the manufacturer's instructions can result in death or serious injury.

- 8.5.2 Additional warning statements shall address the following, at a minimum.
- Note 5—Address means that verbiage other than what is shown can be used as long as the meaning is the same or information that is product-specific is presented.
- 8.5.3 For sling carriers designed for a single occupant, the warning statement in 8.5.3.1 shall be addressed. For sling carriers designed for use with two occupants at one time in any of the carrying positions, the warning statement in 8.5.3.2 shall be addressed.
- 8.5.3.1 Only use this carrier with children weighing between [manufacturer's minimum recommended weight] and [manufacturer's maximum recommended weight].
- 8.5.3.2 Only use this carrier with children weighing between [manufacturer's minimum recommended weight] and

[manufacturer's maximum recommended weight] for a total occupant weight of [manufacturer's maximum combined occupant weight].

8.5.4 SUFFOCATION HAZARD

- Babies younger than 4 months can suffocate in this product if face is pressed tightly against your body. Babies at greatest risk of suffocation include those born prematurely and those with respiratory problems.
- Check often to make sure baby's face is uncovered, clearly visible, and away from caregiver's body at all times.
- Make sure baby does not curl into a position with the chin resting on or near baby's chest. This position can interfere with breathing, even when nothing is covering the nose or mouth.
- If you nurse your baby in carrier, always reposition after feeding so baby's face is not pressed against your body.
- Never use this carrier with babies smaller than 8 pounds without seeking the advice of a healthcare professional.

FALL HAZARD

- Leaning, bending over, or tripping can cause baby to fall.
 Keep one hand on baby while moving.
- 8.5.5 A pictogram comparing proper infant positioning with improper infant positioning for one or two occupants, depending on the design of the product, such as the example in Fig. 5, shall be included adjacent to the warning text.
- 8.5.6 An example warning in the format described in this section is shown in Fig. 6.

9. Instructional Literature

- 9.1 Instructions shall be provided with the product and shall be easy to read and understand, and shall be in the English language at a minimum. These instructions shall include information on assembly, adjustment, restraint system, maintenance, cleaning, storage and use, where applicable.
- 7-9.2 The instructions shall include all warnings specified in 8.5. 4887-b944-flee1b049425/astm-f9907-22
- 9.3 The warnings in the instructions shall meet the requirements specified in 8.4.4, 8.4.5, and 8.4.6, except that sections 6.4 and 7.2–7.6.3 of ANSI Z535.4 2011, American National Standard for Product Safety Signs and Labels need not be applied. However, the signal word and safety alert symbol shall contrast with the background of the signal word panel, and the cautions and warnings shall contrast with the background of the instructional literature.

Note 6—For example, the signal word, safety alert symbol, and the warnings may be black letters on a white background, white letters on a black background, navy blue letters on an off-white background, or some other high-contrast combination.

- 9.4 Any instructions provided in addition to those required by this section shall not contradict or confuse the meaning of the required information, or be otherwise misleading to the consumer.
- Note 7—For additional guidance on the design of warnings for instructional literature, please refer to ANSI Z535.6, American National Standard: Product Safety Information in Product Manuals, Instructions, and Other Collateral Materials.
- 9.5 Instructions shall contain an image—pictogram, photograph, or drawing—of each manufacturer's recommended carrying position.