



Designation: F2549 – 14

Standard Consumer Safety Specification for Frame Child Carriers¹

This standard is issued under the fixed designation F2549; 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 is intended to address incidents reported by the U.S. Consumer Product Safety Commission (CPSC) relating to frame child carriers.

In response to the incident data compiled by the CPSC, this consumer safety specification attempts to minimize the hazards associated with these products from the following: (1) occupant retention, (2) structural integrity, and (3) deficiency of consumer education regarding product use. This consumer safety specification is intended to deal with reasonably foreseeable use and misuse of the products. This consumer safety specification does not apply to products that are blatantly misused, nor does it apply to products used by consumers in a careless manner, violating normal practice or disregarding the instructions or warnings provided with the product, or both.

1. Scope

1.1 This consumer safety specification covers performance requirements, test methods, and marking requirements to promote safe use of frame child carriers.

1.2 This consumer safety specification is intended to minimize the risk of injury to a child from the normal use and reasonably foreseeable misuse of these products.

1.3 For purposes of definition, a frame child carrier is a product, normally of sewn fabric construction on a tubular metal or other frame, which is designed to carry a child, in an upright position, on the back of the caregiver. A frame child carrier is intended for use with a child that is able to sit upright unassisted and weighs between 16 and 50 lb (7.3 and 18.1 kg). The frame child carrier is intended to be worn on the back of the caregiver's body, with the carrier, and thus the child, suspended from both shoulders of the caregiver. The seated position of the child is either facing towards or away from the caregiver.

1.4 No frame child 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.

1.5 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 frame child carrier is in use.

1.6 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.

1.7 The following precautionary caveat pertains only to the test method portion, Section 7 of this consumer safety specification. *This standard may involve the use of hazardous materials, operations, and equipment. 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:²

D3359 Test Methods for Measuring Adhesion by Tape Test
F963 Consumer Safety Specification for Toy Safety

2.2 EN Standard:³

EN 13209 Child Use and Care Articles (Child Carriers
Safety Requirements and Test Methods)

¹ This 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.

³ Available from European Committee for Standardization (CEN), 36 rue de Stassart, B-1050, Brussels, Belgium, <http://www.cenorm.be>.



FIG. 1 CAMI Dummy, Mark II

2.3 Federal Regulations:⁴

16 CFR 1500 Hazardous Substance Act regulations including:

1500.3 (c) (6) (vi) Definition of “Flammable Solid”

1500.44 Method for Determining Extremely Flammable and Flammable Solids

1500.48 Technical Requirements for Determining a Sharp Point in Toys or Other Articles Intended for Use By Children Under Eight Years of Age

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

1500.50-52 Test Methods for Simulating Use and Abuse of Toys and Other Articles for Use by Children

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 1303 Ban of Lead Containing Paint and Certain Consumer Products Bearing Lead-Containing Paint

2.4 Other Document:

CAMI Infant Dummy, Mark II (see Fig. 1)

3. Terminology

3.1 Definitions:

3.1.1 *conspicuous*—visible when the product is in the manufacturer’s use position to a caregiver who is placing the occupant in the frame child carrier or when the caregiver places the product on his or her body.

3.1.2 *cord*—length of slender, flexible material including monofilaments, rope, woven and twisted cord, plastic or textile tapes, ribbons, and those fibrous materials commonly called string.

3.1.3 *fabric*—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.

3.1.4 *handle*—a component intended to facilitate lifting of the frame child carrier.

3.1.5 *kickstand*—a hinged frame member designed to deploy and allow the child carrier to stand freely, in the upright position, for loading of child. The frame member can then be retracted when the carrier is in use.

3.1.6 *leg opening*—the opening in the frame child carrier through which the occupant’s legs extend when the product is used in any of the manufacturer’s recommended use positions.

3.1.7 *manufacturer’s recommended use position(s)*— any 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. This specifically excludes positions that the manufacturer shows in a like manner in its literature to be unacceptable, unsafe, or not recommended.

3.1.8 *occupant*—that individual who is restrained in a seated position inside the frame child carrier in one of the manufacturer’s recommended use positions.

3.1.9 *occupant retention system*—a system provided to secure the occupant in a seated position in any of the manufacturer’s recommended use positions.

3.1.10 *non-paper label*—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.

3.1.11 *paper label*—any label material that tears without the aid of tools and leaves a fibrous edge.

3.1.12 *seam*—a means of joining fabric components, such as sewing, welding, heat sealing, or gluing.

3.1.13 *static load*—a vertically downward force applied by a calibrated force gage or by dead weights.

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 $73 \pm 9^{\circ}\text{F}$ ($23 \pm 5^{\circ}\text{C}$) for at least 1 h 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.

5. General Requirements

5.1 *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.

5.2 *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.

⁴ 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>.

5.3 *Lead in Paint*—The paint or surface coating on the product shall comply with 16 CFR 1303.

5.4 *Wood Parts*—Prior to testing, any wooden parts shall be smooth and free of splinters.

5.5 *Scissoring, Shearing, Pinching*—A product, when in a manufacturer's recommended use position, shall be designed and constructed so as to prevent injury to the occupant from a 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 shall not be permissible when the edges of any rigid parts admit a probe greater than 0.210 in. (5.30 mm) and less than 0.375 in. (9.50 mm) diameter at any accessible point throughout the range of motion of such parts.

5.6 *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. 2). The product shall be evaluated in all manufacturers' recommended use positions.

5.7 *Exposed Coil Springs*—Any exposed coil spring which is accessible to the occupant, having or capable of generating a space between coils of 0.210 in. (5.33 mm) or greater during static load testing (see 7.3) shall be covered or otherwise designed to prevent injury.

5.8 *Locking and Latching*—Any frame child carrier that folds, for storage or transport, shall have a latching or locking device or other provision in the design that will prevent the unit from unintentionally folding when properly placed in the manufacturer's recommended use position. The unit shall

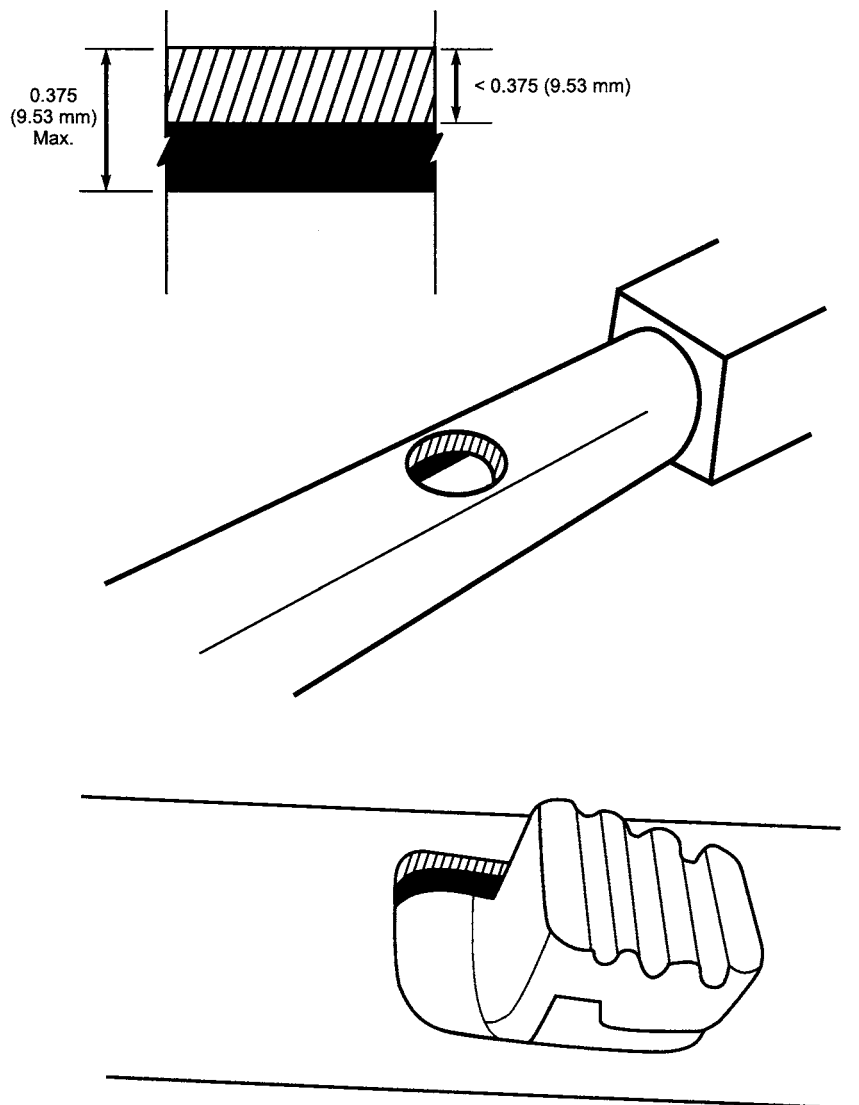


FIG. 2 Opening Example