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CONSUMER PRODUCT SAFETY COMMISSION

16 CFR Parts 1112 and 1228

[Docket No. CPSC-2014-0018]

Safety Standard for Sling Carriers

AGENCY: Consumer Product Safety Commission.

ACTION: Final rule.

SUMMARY: The Danny Keysar Child Product Safety Notification Act, section 104 of the Consumer Product Safety Improvement Act of 2008 (CPSIA), requires the United States Consumer Product Safety Commission (Commission or CPSC) to promulgate consumer product safety standards for durable infant or toddler products. These standards are to be “substantially the same as” applicable voluntary standards, or more stringent than the voluntary standard if the Commission concludes that more stringent requirements would further reduce the risk of injury associated with the product. The Commission is issuing a safety standard for infant slings (sling carriers) in response to the direction of section 104(b) of the CPSIA. In addition, the Commission is amending its regulations regarding third party conformity assessment bodies to include the mandatory standard for slings in the list of Notices of Requirements (NOR) issued by the Commission.

DATES: This rule is effective January 30, 2018. The incorporation by reference of the publication listed in this rule is approved by the Director of the Federal Register as of January 30, 2018.

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SUPPLEMENTARY INFORMATION:

I. Background and Statutory Authority

The CPSIA was enacted on August 14, 2008. Section 104(b) of the CPSIA, part of the Danny Keysar Child Product Safety Notification Act, requires the Commission to: (1) examine and assess the effectiveness of voluntary consumer product safety standards for durable infant or toddler products, in consultation with representatives of consumer groups, juvenile product manufacturers, and independent child product engineers and experts; and (2) promulgate consumer product safety standards for durable infant or toddler products. Standards issued under section 104 are to be “substantially the same as” the applicable voluntary standards or more stringent than the voluntary standard if the Commission concludes that more stringent requirements would further reduce the risk of injury associated with the product.

The term “durable infant or toddler product” is defined in section 104(f)(1) of the CPSIA as “a durable product intended for use, or that may be reasonably expected to be used, by children under the age of 5 years.” Section 104(f)(1)(H) provides that the term “durable infant or toddler product” includes “infant carriers.”

In this document, the Commission is issuing a safety standard for sling carriers.¹ Section 104(f)(2)(H) of the CPSIA lists “infant carriers” as one of the categories of durable infant or toddler products. As indicated by a review of ASTM’s standards and retailers’ websites, the

¹ The Commission voted 3-2 to publish this notice in the Federal Register. Chairman Elliot F. Kaye, Commissioner Robert S. Adler, and Commissioner Marietta S. Robinson voted to approve publication of the final rule. Commissioners Ann Marie Buerkle and Joseph P. Mohorovic voted against publication of the final rule.

category of “infant carriers” includes hand-held infant carriers, soft infant carriers, frame backpack carriers, and sling carriers. The Commission has issued final rules for three types of infant carriers: hand-held infant carriers (78 FR 73415 (December 6, 2013)), soft infant carriers (78 FR 20511 (April 5, 2013)) and frame carriers (80 FR 11113 (March 2, 2015)). In the Commission’s product registration card rule identifying additional products that the Commission considers durable infant or toddler products necessitating compliance with the product registration card requirements, the Commission specifically identified “infant slings,” or sling carriers, as a durable infant or toddler product. 76 FR 68668 (December 29, 2009). Accordingly, 16 CFR 1130.2(a)(18) now specifically identifies “infant slings” as a durable infant or toddler product. At the notice of proposed rulemaking (NPR) stage, the staff briefing package for the proposed rule included a detailed technical analysis of the durability of sling carriers, which concluded that sling carriers are durable products. The durability of infant slings is further discussed in section VI.G of this preamble.

Because the voluntary standard on infant slings, ASTM 2907–15, *Standard Consumer Safety Specification for Sling Carriers*, refers to “infant slings” as “sling carriers,” this document refers to infant slings as “sling carriers.” The terms are intended to be interchangeable and have the same meaning.

On July 23, 2014, the Commission issued an NPR for sling carriers. 79 FR 42724. The NPR proposed to incorporate by reference the voluntary standard, ASTM F2907-14a, *Standard Consumer Safety Specification for Sling Carriers*, without modification.

In this document, the Commission is issuing a mandatory safety standard for sling carriers. As required by section 104(b)(1)(A), the Commission consulted with manufacturers, retailers, trade organizations, laboratories, consumer advocacy groups, consultants, and the

public to develop this standard, largely through the ASTM process. The rule incorporates by reference the most recent voluntary standard, developed by ASTM International, ASTM F2907-15, with one modification.

In addition, the final rule amends the list of NORs issued by the Commission in 16 CFR part 1112 to include the standard for sling carriers. Under section 14 of the Consumer Product Safety Act (CPSA), the Commission promulgated 16 CFR part 1112 to establish requirements for accreditation of third party conformity assessment bodies (or testing laboratories) to test for conformity with a children's product safety rule. Amending part 1112 adds to the list of children's product safety rules a NOR for the sling carriers standard.

II. Product Description

The scope section of ASTM F2907-15 defines a "sling carrier" as "a product of fabric or sewn fabric construction, which is designed to contain a child in an upright or reclined position while being supported by the caregiver's torso." These products typically are intended for children starting at full-term birth, until a weight of about 35 pounds. The designs of infant slings vary, but the designs generally range from unstructured hammock-shaped products that suspend from the caregiver's body, to long lengths of material or fabric that are wrapped around the caregiver's body. Infant slings normally are worn with the infant positioned on the front, hip, or back of the consumer, and with the infant facing toward or away from the consumer. As stated in the "sling carrier" definition, these products generally allow the infant to be placed in an upright or reclined position. However, the reclined position is intended to be used only when the infant is worn on the front of the consumer. The ability to carry the infant in a reclined position is the primary feature that distinguishes sling carriers from soft infant and toddler carriers, another

subset of sling carriers. The Commission has identified three broad classes of sling carrier products available in the United States:

- Ring slings are hammock-shaped fabric products, in which one runs fabric through two rings to adjust and tighten the sling.
- Pouch slings are similar to ring slings but do not use rings for adjustment. Many pouch slings are sized, rather than designed, to be adjustable. Other pouch slings are more structured and use buckles or other fasteners to adjust the size.
- Wrap slings are generally composed of a long length of fabric, up to approximately 6 yards long, and up to 2 feet wide. A wrap sling is completely unstructured with no fasteners or other means of structure; instead, the caregiver uses different methods of wrapping the material around the caregiver's body and the child's body to support the child. Wrap-like slings mimic the manner in which a wrap supports the child, but they use fabric in other manners, such as loops, to reduce the need for caregivers to learn wrapping methods.

ASTM F2907 does not distinguish among the type of slings. The voluntary standard's requirements apply equally to all slings.

III. Market Description

In the NPR, CPSC staff reported that it had identified 47 suppliers of sling carriers to the U.S. market, including 33 companies based in the United States and 14 foreign companies that exported directly to U.S. customers via Internet sales or to U.S. retailers. The 33 U.S.-based firms included 25 manufacturers, four importers, and four firms for which the supply source was not identified. Under U.S. Small Business Administration (SBA) definitions, all but one of the 47 firms would be considered a "small business." The NPR also noted that "there may be

hundreds more suppliers that produce small quantities of slings.” In response to the NPR, the Commission received comments, including from the SBA, concerning the rule’s potential impact on small businesses. As explained further in section IX of this preamble, the final regulatory flexibility analysis (FRFA) uses information provided by The Baby Carrier Alliance Institute (BCIA) to expand on the discussion in the NPR and give additional information about the rule’s possible effect on small businesses.

The market price of sling carriers varies, depending on the type of sling carriers. Ring slings are generally the least expensive, with prices ranging from \$40 to \$200, and an average price of \$100. Handwoven wraps have a price range of \$200 to \$800 per wrap. Machine-woven wraps range in price from \$65 to \$400, with an average price of about \$150. The BCIA provided no information on pouches, but pricing is believed to be similar to ring slings.

More recently, information provided by the BCIA confirms the role of numerous small and very small artisanal manufacturers in the sling market. The BCIA identified more than 324 U.S. manufacturers of slings, wraps, and pouches, including both members and non-members of BCIA, many of which are *very* small. The firms that the BCIA identified overlap partially with the 47 suppliers identified by CPSC staff, but the firms do not include some of the larger non-members of BCIA, some European firms that export to the United States, and a number of small Chinese firms. The BCIA has also identified some additional hand weavers. Thus, the total number of manufacturers may reach 400. According to the BCIA, about 250 of the 324 identified small sling manufacturers had annual sales revenue of less than \$10,000, and an additional 45 had revenues of greater than \$10,000, but less than \$50,000. Most of these *very* small manufacturers (especially those with sales revenue of \$50,000 or less annually) worked out of their home, and had one or no employees. In a letter to CPSC concerning the sling

rulemaking, the SBA Office of Advocacy described many of these very small manufacturers as “stay-at-home moms that supplement their income by creating the slings.”

According to the BCIA, a common scenario for the development of a very small sling manufacturer starts with a mother using various slings or soft carriers and then deciding to make her own design in her home. Some of these home businesses grow into larger businesses that become more specialized and sophisticated, typically designing and marketing their own products, but having the product manufactured overseas. Based on emails with the BCIA, and CPSC staff’s review of sling websites, the newer home businesses generally may not know about the sling carrier voluntary standard or realize they may be subject to existing federal regulations on children’s products, such as the CPSIA regulations on product labeling and registration cards.

The BCIA reports that dollar sales for the 324 manufacturers they identified amount to approximately \$36 million annually. Unit sales for these manufacturers are estimated to be about 500,000 annually. Given the exclusion of some of the larger wrap and pouch manufacturers from the total provided by the BCIA, we estimate annual unit sales at 800,000 to 1 million and dollar sales to be about \$55 million to \$70 million annually.

In 2013, the CPSC conducted a Durable Nursery Product Exposure Survey (DNPES) of U.S. households with children under age 6. Data from the DNPES indicate that there were an estimated 7.33 million slings in U.S. households in 2013 (with 95 percent probability that the actual value is between 6.2 million and 8.5 million). The survey data also indicated that about 23.4 percent of the slings in U.S. households were currently in use (an estimated 1.72 million slings, with 95 percent probability that the actual value is between about 1.17 million and 2.26 million).

IV. Incident Data

In the NPR briefing package, CPSC staff identified a total of 122 sling carrier-related incidents, including 16 fatalities and 54 injuries that reportedly occurred from January 2003 through October 27, 2013. Since the extraction of the data for the NPR briefing package, CPSC staff has received 37 new reports (1 fatal and 36 nonfatal) related to sling carriers, reported between October 28, 2013 and September 15, 2016. Although reporting is ongoing, most of the new reports of incidents received, thus far, show a date of occurrence in 2014. Among the incidents where the age of the victim was reported, the children were 10 months old or younger. Among these new reports of incidents:

- Fatalities: The new fatality incident occurred in 2013, when a 5-month-old was severely injured due to a lack of oxygen; the child passed away in 2015.
- Nonfatal incidents: Among the 36 new nonfatal incident reports related to sling carriers, 13 reported an injury to the infant or toddler while using the product. All of the injury victims were infants ranging in age from 1 month to 10 months. Among the 13 nonfatal injuries, one required hospitalization for a leg fracture following a fall. Another skull fracture injury was reported, but hospitalization was not mentioned. Other injuries not requiring hospitalization included closed-head injuries, contusions/abrasions, lacerations/scratches, and skin rash.

The number of emergency department-treated injuries associated with sling carriers for the period covered was insufficient to derive any reportable national estimates. Therefore, reportable injury estimates cannot be calculated.

There were no new hazard patterns identified among the 37 reports received by the CPSC since publication of the sling carrier NPR; the hazards identified in the 37 new incidents are

consistent with the hazard patterns identified among the incidents present in the NPR briefing package. Those hazard patterns were:

- ***Consumer comments:*** consumer concerns or observations about perceived safety hazards of a product, a product's noncompliance with standards, and/or contentions of unauthorized sale;
- ***Caregiver missteps:*** instances where the caregiver slipped, tripped, or grabbed/dropped the child during placement into/removal out of the carrier;
- ***Miscellaneous product-related issues:*** consumers complaints about unspecified product breakage, or the poor quality of the fabric, the ring(s), and/or the stitching used in the sling carrier;
- ***Unspecified falls;***
- Problems with ***positioning*** the infant in the sling carrier; and
- Problems with ***buckles***: releasing, slipping, or breaking of buckles, thereby causing infants to fall or nearly fall.

V. Overview of ASTM 2907

The voluntary standard for sling carriers was first approved and published in 2012, as ASTM F2907-12, *Standard Consumer Safety Specification for Sling Carriers*. ASTM has revised the voluntary standard seven times since the initial publication. The current version, ASTM F2907-15, was approved on October 15, 2015, and published in November 2015. The NPR for sling carriers proposed incorporating ASTM F2907-14a by reference; however, ASTM has revised the voluntary standard twice since then. The revisions since the NPR are listed below.

- **ASTM F2907-14b:** This revision modified the occupant-retention test pass/fail criteria, increasing from 1 inch to 3 inches the amount the ring sling attachment system may slip while still passing the standard. This ballot was open at the time of the CPSC NPR, and the NPR requested comments on the issue. Six comments to the NPR agreed with the change ASTM had balloted and zero disagreed.
- **ASTM F2907-15:** Under this revision, the test torso for the occupant-retention test is clothed in a “tight-fitting, thermal knit or waffle-weave, cotton or cotton/polyester undershirt or equivalent.” Seven NPR comments requested a change to the NPR (which did not require any clothing on the test torso) to increase the friction characteristics of the test torso. This particular issue was brought to the subcommittee by test laboratories and small manufacturers after publication of the NPR.

VI. Response to Comments

A. Comment Overview

The NPR solicited information and comments concerning all aspects of the proposed rule. The NPR also specifically asked for comments regarding the proposed 12-month effective date, the changes that were under consideration by ASTM at the time of the NPR, and the costs of labeling. The Commission received 188 comments from 162 commenters. Twenty-seven commenters submitted two or more comments, while two comments were signed by multiple people. Staff divided the comments into 11 major topic areas, and summary responses follow.

The 11 major topic areas are listed below:

- 12-month effective date;
- ASTM balloted item;
- Changes to test equipment;

- Consumer education;
- Consumer use, misuse, and user error;
- Durable product definition and wrap exemption requests;
- Economic burden;
- Existing rules: product registration card and soft infant and toddler carriers (16 CFR 1126);
- Incident data;
- Instructions and labeling;
- Periodic testing: costs, frequency, and necessity; and
- Miscellaneous other.

The full comments can be found on [regulations.gov](https://www.regulations.gov).

B. 12-month effective date

***Comment:** Six comments discussed the proposed effective date for the rule. Of these, only one comment opposed the proposed 12-month effective date. The commenter who opposed the 12-month period stated the belief “that smaller manufacturers can in fact move more quickly and can adapt to these changes as many were involved in the writing of the ASTM standard which is already published.” The remaining comments, including those from the U.S. Small Business Administration’s Office of Advocacy, agreed that 12 months was appropriate for this product.*

Response: Many of the commenters suggested that the testing requirements of the rule, which will not go into effect until the effective date of the rule, will result in a substantial economic burden to very small producers. This conclusion is supported by the analysis presented in the Final Regulatory Flexibility analysis (FRFA). Consistent with the Commission’s proposal,

the final rule provides a 12-month effective date, longer than the 6-month period the Commission usually provides for rules under section 104 of the CPSIA. The 12-month effective date will give needed time for some very small producers, which are frequently home-based and have limited experience dealing with regulatory processes. This will allow these producers additional time to learn how to comply with the testing and recordkeeping requirements, as well as spread out the testing costs over a longer period.

C. ASTM balloted item

***Comment:** Six commenters expressed support for the changes made to testing for ring slings published in ASTM F2907-14b, the version of the sling carrier standard published following CPSC's NPR, and which resulted from the ballot that was open at the time of the NPR. One commenter posed a question related to the change: "If this recommendation is being made to allow slippage up to 3 on ring slings, then would that recommendation be made on wraps as well?"*

Response: The Commission agrees with the comments favoring adopting the change. CPSC staff tested the revision in ASTM F2907, which was published as ASTM F2907-14b, and staff found that the increase from 1 inch to 3 inches did not decrease the stringency of the standard. The dual-ring lock mechanism on ring slings is unique to those products, and to maintain the strength of the dual-ring lock, the fabric must be under tension. During normal use, this tension is maintained from the weight of the child. During testing, the dual-ring lock is repeatedly exposed to tension, then release, as the test torso moves up and down. Due to the nature of the dual-ring lock, this allows the fabric to creep through the dual-ring lock. However, some fabric creep does not appear to compromise the overall ability of the sling to contain the child. The test still maintains the requirement that the dual-ring lock cannot completely release.

Staff found that this fabric creep was unique to the dual-ring lock. Regarding wraps, there was generally little, if any, fabric creep; and in general, the testing only tightened the knots. Because some fabric creep is normal in a dual-ring lock but should not occur with other attachment mechanisms, staff concluded that the change published in ASTM F2907-14b did not affect the stringency. During ASTM task group discussions before balloting this revision, the task group discussed the question of other attachment mechanisms and concluded that the change should apply only to ring slings because of the unique dual-ring lock mechanism.

D. Changes to test equipment

***Comment:** Seven comments addressed the surface of the test torso. Two commenters asked to “make the dummy less slippery and more accurate to real-life scenarios”; three commenters requested a fabric or fabric-covered test torso; and two commenters suggested changing the test torso pending the outcome of ASTM task group discussions.*

Response: In June 2015, 8 months after the close of the NPR comment period, ASTM F15.21 balloted another change to the test methods. The proposal was to clothe the test torso in “a tight-fitting, thermal knit or waffle-weave, cotton or cotton/polyester undershirt or equivalent.” The ballot item passed and was approved by ASTM on October 15, 2015. CPSC staff repeated testing using the specified shirt and found no significant changes in the test results. Before this ballot item, the ASTM standard did not specify the surface material of the test torso. Thus, test torso surface materials varied among test labs, including wood, metal, and fiberglass. Although the ballot item rationale was based on mimicking real-life conditions in which the caregiver would be clothed when using the sling, CPSC staff expects that standardization of the test torso surface will also increase the repeatability and reliability of test results among test labs.

For these reasons, the Commission agrees with the comments and concludes that ASTM F2907-15 is the most appropriate version of the standard to codify as a final rule.

***Comment:** Two comments suggested using an anthropomorphic mannequin (i.e., a weighted doll with head, neck, arms and legs), instead of a sand bag during the occupant-retention test and a shot-filled bag during the dynamic test.*

Response: Currently, only the restraint test, Section 7.6, uses an anthropomorphic mannequin, specifically the CAMI Infant dummy. For the occupant-retention and dynamic tests, test masses provide the flexibility to fit into a variety of slings, no matter the configuration of the sling. As discussed in the briefing package and public hearing accompanying the NPR, staff and the ASTM committee investigated using a more anthropomorphic mannequin and found that the readily available anthropomorphic mannequin used in many ASTM standards (i.e., the CAMI mannequin) cannot accurately represent the manner in which a child sits in a sling. Developing a new mannequin that is flexible enough to fit into all types of slings would be time- and resource-intensive, without necessarily increasing the stringency or repeatability of the standard.

E. Consumer education

***Comment:** Twenty-six comments expressed that education was all that was needed, instead of regulation or product testing. Sixteen comments discussed the critical role education plays in the safe use of sling carriers, and many of these comments identified education as a key component of preventing user error. Twelve additional comments made more general statements that the focus should be on education, or else they expressed a general sentiment supporting education. One specific commenter (-0137) supported consumer education, but felt “this should be a discussion amongst creators and the safety groups. This should not just be a decision made by the CPSC...”*

Response: The Commission agrees that educating caregivers who use sling carriers is extremely important. The Commission acknowledges that most sling carriers, and especially wrap carriers, require the caregiver to position the child and the fabric in ways that are both practical and safe, and that the skill needed to use a sling properly is not necessarily intuitive to many caregivers. The Commission also agrees that excellent instructions, training, and support are available from baby-wearing educators and other persons with experience and knowledge of the safe use of the product. However, section 104 of the CPSIA requires CPSC to: (1) examine and assess voluntary safety standards for durable infant or toddler products, and to (2) promulgate mandatory consumer product safety standards that are “substantially the same as” the voluntary standards or more stringent than the voluntary standards if the Commission determines that more stringent standards would further reduce the risk of injury associated with these products. Therefore, an educational program, alone, would not satisfy the direction in section 104. The Commission concludes that the requirements for the instructions and product labeling provide a framework that each manufacturer can tailor to the recommended-use positions for their specific slings. This will require that each sling includes the minimum information needed for proper use of the product and that the required on-product positioning label will follow the product throughout its lifecycle.

Comment: Seven commenters specifically mentioned the baby-wearing community (e.g., local baby-wearing groups, Facebook baby-wearing groups, or Babywearing International, a nonprofit organization whose mission is to promote baby-wearing education and support) as a resource available for new caregivers to learn about the use of sling carriers.

Response: The Commission agrees that the groups mentioned provide a valuable resource to promote the safe use of sling carriers and encourages the groups to continue their

work. Staff urges members and groups to become involved with the ASTM International F15.21 subcommittee on sling carriers, which currently includes members representing sling manufacturers, sling industry groups, testing laboratories, and child-safety advocates. Through this voluntary standards consensus process, all voices can be heard in the effort to develop a robust voluntary standard, which forms the basis of the mandatory standards promulgated by CPSC under the Danny Keysar Child Product Safety Notification Act.

***Comment:** Ten commenters suggested a joint public educational campaign among the CPSC and manufacturers, industry groups, or the baby-wearing community. One comment suggested an educational campaign, but did not mention partnering. One comment specifically suggested that the Commission sponsor an educational campaign in conjunction with the final rule and that the informational campaign focus on “specific risks that can only be addressed through proper usage and close attention to the infant” (-0172).*

Response: Although an educational campaign is outside the scope of the rule, a joint informational campaign may be an avenue to provide safety information to sling users.

***Comment:** Six commenters suggested standardizing and regulating education materials and packaging, with two commenters saying that such standardization and regulation of education materials should be the only requirement. One additional commenter expressed general support for ASTM requirements for instructional materials, and another commenter suggested requiring informational brochures.*

Response: The rule incorporates by reference ASTM F2907-15; section 9 of ASTM F2907-15 requires instructions to be provided with each sling and for these instructions to include some standard content, including information on assembly, adjustment, restraint systems (if applicable), maintenance, cleaning, storage, and use. However, education alone does not

address the hazards posed by material failures, such as ripped fabric and broken hardware, nor does an educational program require that all sling carriers be sold with instructions and on-product warning labels that will follow the product through its lifecycle. The rule, by referencing ASTM F2907-15, requires instructions to contain images of each manufacturer's recommended carrying position, all warnings that are required to be on the product, and additional safety-related instructions and information, such as the minimum and maximum weight of the child for which the sling is intended, the importance of checking for damaged seams and hardware, and the warning never to use the sling when balance or mobility is impaired.

F. Consumer use, misuse, and user error

***Comment:** Seventy-one comments discussed consumer use or the role of user error in the reported incidents. Sixty-four comments made general statements asserting that injuries resulted from user error; five comments suggested that manufacturers were not responsible for misuse; and three comments discussed the benefits of using sling carriers. In addition, several commenters raised other issues related to consumer use or user error.*

Response: CPSC agrees that many incidents suggest that caregiver behavior plays a vital role in the proper use of sling carriers. In addition, the Commission agrees that, due to the unique nature of sling carrier products, educating caregivers is the primary method to address user error. The Commission concludes that the warnings and instruction requirements are the best way, within CPSC's authority, to educate consumers. In addition, reasonably foreseeable misuse is one of the factors that CPSC must consider. The Commission encourages manufacturers to provide the best instructions and warnings to address foreseeable misuses of their products. For products where a design change could prevent a possible misuse, that is

preferable; however, for sling carriers, education, including instructions and warnings, may be the best way to address certain foreseeable user errors. Finally, although it is difficult to quantify the benefits mentioned in these comments, the Commission appreciates the examples that commenters provided.

***Comment:** One commenter (-0185) suggested that the reclined position should not be a recommended-use position; another commenter (-0041) recommended not showing “advanced carries” in instructions, and instead, recommended having the instructions show “an unsafe carry.”*

Response: The ability to use a sling in the reclined position is one of the key factors differentiating soft infant and toddler carriers from sling carriers. The unstructured nature of many sling carriers suggests that it could be reasonable and foreseeable that caregivers will place a child in a position other than perfectly upright. The instructions and warnings are key to giving caregivers the information they need to position a child properly, including positions with a slight recline. In addition, the on-product label requirement in ASTM F2907-15 calls for examples of improper positioning.

G. “Durable product” definition and wrap exemption requests

***Comment:** Numerous commenters requested that wraps be exempted from any new regulations on sling carriers. Eight commenters suggested that slings should not be considered durable products.*

Response: The Commission considered the possibility of exempting wraps and other all-fabric carriers without load-bearing hardware or seams. However, exclusion of wraps would preclude any educational or labeling requirements for these products, along with third party testing requirements. A large number of commenters stressed the importance of educational

materials, which CPSC considers to include instructions and warnings. In addition, the NPR included an analysis explaining why the Commission concluded that sling carriers, including wraps, are a type of infant carrier, a product specifically identified as a “durable infant or toddler product” in section 104(f)(2)(H) of the CPSIA. Specifically, the Commission considered the following factors in the initial determination:

- Age of children carried in sling carriers
 - One reported incident victim was 3 years old, which demonstrates that these products are used past the first year of life.
 - The voluntary standard (F2907) defines a “sling carrier” for use up to 35 pounds. Three-year-old children are likely to still be within this weight limit, and some 4- and 5-year-old children may be less than 35 pounds.
- Durability of sling carrier parts
 - Although wraps and pouch slings are all-fabric products, ring slings, modifications of wraps and pouch slings, and other products that meet the definition of a “sling carrier” also contain parts that are considered durable from an engineering perspective and suggest that they were selected for long-term use. In addition, the test methods in ASTM F2907 combine to ensure that slings meet a minimum level of durability.
- Reuse of sling carriers
 - Two incidents involved a hand-me-down sling carrier. One sling was reported to have been received from a relative, and the other sling carrier was reported to have been used for the infant’s older sibling.

- Preliminary data from CPSC's durable nursery product survey indicate that only 4 percent of respondents throw away used sling carriers; and 96 percent of respondents save the sling carrier for later use, sell the sling carrier, or give away the sling carrier. In addition, the CPSC's durable nursery products survey indicated that approximately one-fifth of sling carrier frequent users obtain their sling carrier second hand.
- With 96 percent of survey respondents to CPSC's durable nursery products survey indicating that the sling carrier was saved or otherwise passed on to another caregiver, it is foreseeable that some sling carriers are likely to be used by more than one child. In addition, sling carriers appear to be bought and sold on resale markets.
- Recalls of sling carriers
 - CPSC issued a recall in March 2008, regarding a certain sling carrier that was manufactured in March and April 2007. CPSC received reports of incidents involving sling carriers subject to the recall more than 5 years after the recall announcement.
 - CPSC issued a recall in March 2010, regarding a different sling carrier that was sold from 2003 to 2010. That recall was reissued as a safety alert 2 years later because the sling carriers subject to the recall were found in the marketplace.

No commenters provided data suggesting that slings, or specifically wraps, are not infant carriers, or are single-use/single-user products that are categorically used for short periods of time only, or are otherwise intended to have a very short lifespan. Therefore, the Commission

concludes that wraps are infant carriers that meet the definition of “durable nursery products” under CPSIA section 104. Additional discussion of these issues is included in the FRFA.

H. Economic burden

Comment: *According to the SBA Office of Advocacy (Advocacy), “the CPSC’s assumptions [regarding] the number [of firms affected by the proposed rule] and impact [of the proposed rule] on affected small carrier manufacturers is based on inadequate data and analyses.” According to Advocacy, the CPSC provides “the public with some data on the sling carrier market, but it is an inadequate basis for the CPSC’s analyses as described in the IRFA.” Advocacy’s comment concluded: “Advocacy recommends the CPSC gather more information on small sling carrier manufacturer’s market share as well as the number of accidents that can be attributed to them. If the CPSC is unable to obtain this information because of the uncertainty inherent in its analysis, Advocacy recommends the CPSC present a range of potential costs instead of one point estimate.”*

Response: For the NPR, CPSC staff prepared an initial regulatory flexibility analysis (IRFA) examining the impact the NPR could have on small business. The IRFA identified 47 suppliers of slings to the U.S. market, but noted that there might be hundreds more suppliers that produce small quantities. For the FRFA, staff expanded the discussion of firms to include 324 firms identified by the BCIA, an industry trade association. According to the BCIA, about 250 of the 324 identified firms had total annual sales revenues of less than \$10,000, and an additional 45 had revenues of greater than \$10,000, but less than \$50,000. These identified firms with revenues less than \$50,000 annually were characterized in our analysis as “very small firms.” The expanded discussion in the FRFA includes: (1) additional information on the characteristics of

the firms, (2) estimates of annual industry-wide sales, (3) estimates of the numbers of slings in use, and (4) estimates of the market share of the very small firms.

The FRFA also includes an expanded discussion of sling injuries and injury rates, and what we know about the injuries involving slings produced by small and very small firms. This discussion is included in the section of the FRFA titled, “Sling Injuries and Risk Estimates.”

Finally, the FRFA substantially expanded the discussion of the likely impacts of the rule on small and very small sling producers. Based largely on the information from the BCIA, as well as some information provided in the comments from Advocacy, staff developed four hypothetical “representative” producers: (1) a hand weaver, (2) a ring sling producer, (3) a machine weaver, and (4) a mass producer. For each of these producers, staff developed estimates of annual sales, average unit sales prices, and the number of style/fabric combinations likely to be produced by the firms, all of which will affect the estimated costs of the rule. For the very small representative firms (*i.e.*, the hand weaver and ring sling producer), the estimated annual testing costs that would be triggered by the rule amounted to about 16 percent to 36 percent of total revenues. For the machine weaver, the annual testing costs amounted to an estimated 2.4 percent to 4.7 percent of revenues. Only the mass producer (with annual revenues of about \$2.7 million) had annual expected costs of less than 1 percent. The FRFA concludes that the final rule would have a significant adverse impact on a substantial number of small businesses and could cause numerous small producers to exit (or not to enter) the market. In addition, there may be significant additional impacts on small manufacturers, including the need to provide instructional materials. We cannot rule out the potential for compliance costs to be high enough that they could lead to significant economic impacts, especially for very small manufacturers.

Comment: Advocacy recommended that the CPSC expand and improve its discussion of alternatives that may reduce the costs of the rule on small businesses.

Response: As recommended, the FRFA substantially expanded the discussion of alternatives the Commission could choose that would reduce the impact of the rule on small businesses. These alternatives are discussed in detail in the FRFA (Tab D of the staff's briefing package) and under Analysis of Alternatives in this briefing memorandum. The options include:

- Determining that slings are not durable infant or toddler products and terminate rulemaking;
- Delaying the effective date of the requirements;
- Exempting wraps (a specific type of sling made entirely of fabric) from the requirements of standard;
- Allowing a small batch exemption for small manufacturers (this alternative would require a change in a federal statute);
- Amending the existing CPSC regulation at 16 CFR part 1107 to reduce the frequency of periodic testing required for small or home-based sling producers; or
- Adopting ASTM F2907-15 with no changes, and directing staff to work with ASTM to address the staff-recommended change.

Comment: More than 100 of the 188 comments received in response to the NPR focused on the economic burden that the rule and testing requirements would impose on very small producers of slings. Some of these commenters said that they recognized the need for some product safety regulation for slings, but they also expressed concern about the impact of the rule on very small businesses. Many of the comments said that the costs resulting from the testing requirements would drive small producers out of business. Some of the commenters, who are

very small sling producers, suggested that the rule would be cost prohibitive and would probably result in their exit from the sling market. Several users expressed concern that the proposed rule would reduce the availability of slings in the marketplace.

Response: The Commission agrees that the rule and associated testing requirements will pose a significant economic burden on many small producers and has discussed these possible impacts in the FRFA. The FRFA discussion of alternatives has been expanded to include additional alternatives that were not discussed in the IRFA and could reduce the negative impact of the rule on small businesses. Despite the expected impact, the Commission is promulgating the final rule for sling carriers in order to comply with Congressional direction regarding durable infant and toddler products and the Commission designation in the product registration card rule of infant carriers as such products. The Commission also believes that a mandatory standard is necessary despite the costs to small business because the standard would address mechanical or fabric failure hazards and impose warning and instruction requirements that would address suffocation hazards. The staff's briefing package notes that, of the six sling recalls since 2001, four involved small manufacturers, of which two may have been *very small* with sales revenue of less than \$50,000 annually. One recall initiated after a death (a 10-day old-boy) appears to have involved a very small manufacturer. The recall was for 40 slings sold over an 8-month period, or five slings per month. Another recall, for a potentially hazardous defect in the stitching (fall hazard), involved 165 slings sold over a 4-month period, or 41 slings per month. A third recall involved defective aluminum rings, also a potential fall hazard, with 1,200 ring slings sold over a 9-month period, or about 133 slings per month. The largest recall involving a small business concerned 5,000 slings with defective rings sold over a 7-month period, roughly 700 per month. The remaining two recalls involved the same large firm. Additionally, staff's briefing package

includes information regarding production test plans that could reduce the frequency of testing for manufacturers that implement a product test plan, which could reduce the testing costs.

Comment: Three commenters reported that information in the IRFA did not reflect the true number of small businesses that would be affected by the rule or the significant financial impact that would be imposed on small producers. These commenters provided additional information on the number and size of the very small producers and the likely financial impact of the rule.

Response: The Commission agrees that the discussion of the market and market impact of the sling proposed rule was not fully descriptive of the very small manufacturers in the marketplace or of the full economic burden that would be imposed by the rule. The information provided by the commenters was used to develop estimates of annual sales, average unit sales prices, and the number of style/fabric combinations likely to be produced by the firms; all of this information will affect the estimated testing costs of the rule. The information has been incorporated into the FRFA's description of the sling market and in the discussion of cost impacts on small and very small businesses.

I. Existing rules: product registration card and soft infant and toddler carriers (16 CFR part 1126)

Comment: Three commenters requested reconsideration of the product registration card requirement or specific aspects of it (e.g., “*perforated* registration cards is silly in my opinion”). Three other commenters specifically mentioned that they agreed that the product registration card requirement was necessary to conduct product recalls. One commenter specifically suggested “an online registration system so that the carrier’s owner can be continuously updated.”

Response: The requirements of the product registration rule (which are set out at 16 CFR part 1130) are outside the scope of this rulemaking on sling carriers. We note that the rule does provide for online registration; however, “electronic/email registration does not replace the mandatory requirement stated in section 104(d)(1)(A) of the CPSIA that each manufacturer of a durable infant or toddler product must provide consumers with a postage-paid consumer registration form with each such product.”

J. Incident data

Comment: *Thirty-two commenters raised issues relating to incident data. In general, most of these comments expressed one or two opinions. First, a majority of the comments regarding incidents claim that most injuries and deaths cited in the NPR briefing package result from positioning errors and caregiver missteps. Second, many commenters claimed that no injury or death in the incident data presented was related to the issue of fabric strength.*

Response: For the incidents in which sufficient information was available, caregiver missteps were often cited in the reports; however, there were many incidents with insufficient information. The lack of information is not evidence that product-related defects (for example, fabric weakness) were absent in the incidents.

Comment: *A number of commenters suggested that the injuries are not “the result of manufacturer defects” (e.g., -0011) or not related to structural integrity (e.g., -0063, -0070).*

Response: The Commission disagrees with this comment. Of the 54 injuries, nine were product-related (three buckle-related and six miscellaneous product-related) incidents. Of the 52 non-injury incidents, 12 were product-related (nine buckle-related and three miscellaneous product-related) incidents. An additional 25 reported incidents, including seven fatalities and 15 injuries (including two hospitalizations) under the *undetermined* or *unspecified* category, did not

provide enough information for staff to make a determination on the cause(s) leading to the incident. This lack of information is not the same as conclusive evidence that no manufacturer issues were involved in these incidents. In addition, although voluntary recalls are not necessarily associated with findings of a defect, the NPR discussed three recalls between 2005 and 2007, for structural integrity issues, one associated with four injuries, including a skull fracture. Finally, the updated data provided in Tab A of the staff 's briefing package discuss four new incident reports related to fabrics, rings, and stitching, including a minor injury that occurred when fabric ripped.

***Comment:** Several comments (-0011) raised issues related to risk and relative risk of slings. One specific question was: "How does the rate of injury/death for sling carriers compare to other modes of carrying children?" In addition, comments (e.g., -0011, -0079) suggested that, compared to carrying a child in the caregiver's arms, the risk of carrying a child in a sling carrier was the same or lower.*

Response: CPSC has not compared the rate of injury/death for sling carriers with the rates for similar modes of infant carriers. Such a comparative analysis is not relevant for the purposes of this rulemaking. The Commission does not state that sling carriers are more or less dangerous than other infant carriers, and regulation mandated under section 104 of the CPSIA does not require such a comparison.

***Comment:** "[The] non-incident, non-injury comments helped to inflate the perceived danger of both sling carriers and SITCs."*

Response: For briefing packages on section 104 rules, staff reports on *all* relevant data reported to CPSC. Because the non-injury comments were not used as the basis for any new

requirements for a standard, including them in the briefing package does not affect the issuance of a Section 104 rule.

Comment: Several commenters suggested that “there was an overall lack of information associating injuries with specific makes and models of sling carriers,” (-0011) or that all deaths were due to one type of carrier (e.g., “deaths due to improper use (of what I would imagine were bag style slings). . .” -0087). One commenter’s point, that several other commenters copied and included in their comments, also suggested that “. . .bag style sling carriers are notoriously (anecdotally?) more dangerous than ring slings or woven wraps. . .” and that staff should attempt to correlate data “with a specific brand or general type of sling carrier.”

Response: CPSC staff intentionally omitted make and model information in the NPR briefing package because many of the products involved in incidents were not identifiable in that manner. Providing the information for only the known manufacturers would unfairly identify those entities. The purpose of the rulemaking is to encompass the product class, not specific makes and models of slings of which CPSC staff is aware. When staff observes a pattern of deaths or injuries involving “a specific brand,” that data is investigated by the CPSC’s Office of Compliance. Regarding the request to correlate data with a general type of carrier, staff reviewed the 17 deaths reported in the two briefing packages associated with this rulemaking (16 in the NPR, plus one additional death noted in this final rule package) to identify the type of sling involved in each death. Six deaths were associated with bag-type slings, four with wrap or wrap-like slings, three with ring slings, and one with a pouch sling. There was not enough information to identify the sling type involving the three remaining deaths.

Comment: One comment (-0179) suggested that “suffocation-related incidents are understated. In addition, the commenter suggested that staff “mischaracterizes incidents . . .” by

categorizing some incidents as “undetermined” or “unspecified cause,” instead of identifying the incidents as involving positional asphyxia, and excluding SIDS cases on the basis that they are position-related incidents.

Response: The Commission disagrees. For each rulemaking, CPSC staff, as a team, makes a deliberate decision on the most relevant period to gather data. Usually this period starts from when the latest major version of the relevant ASTM standard occurred. For sling carriers, the very first ASTM standard, F2907–12, was developed using CPSC data from 2003 forward. The NPR covered the period from 2003 forward. Moreover, consistent with other durable product briefing packages, certain incidents (*e.g.*, those with an official cause of death of SIDS, with no additional definitive information) were considered out-of-scope cases. In addition, the commenter cites sling-related data and analysis from CPSC from prior years. The data extraction criteria for those earlier years were different because the data were analyzed for a different purpose (*e.g.*, it may have been a search for *all* fatalities in sling carriers that have been reported to CPSC). The discrepancy is not an attempt to understate the dangers of suffocation associated with the use of sling carriers.

K. Instructions and labeling

Comment: *One commenter requested on-product labeling for products that are manufactured after the effective date, so that consumers can clearly identify products that meet the mandatory standard. An additional comment (-0172) requested that the product include a marking that clearly indicates that a compliant product meets the mandatory standard.*

Response: The Commission is not making any changes to the proposed rule based on this comment because manufacturers are already allowed to label compliant products under section 14 of the CPSA and 16 CFR part 1107. In addition, section 8.1.3 of ASTM F2907 – 15

and the product registration card rule (16 CFR 1130.4) already include requirements that slings bear a code mark or other means to identify the date of manufacture. Additionally, manufacturers or importers may voluntarily label compliant products with the words: “Meets CPSC Safety Requirements,” under section 14 of the CPSA and 16 CFR part 1107. Thus, adding a requirement in the final rule for sling carrier manufacturers to mark their products would be redundant.

***Comment:** Nineteen comments generally discussed the effectiveness of warnings and instructions in addressing the hazards. The most common argument advanced by commenters is that, in the context of sling carriers, labeling, instructions, and similar approaches are superior to performance requirements or to the proposed material testing requirements because the hazards with slings result from user error, infant positioning, or similar behavioral issues. Some comments (e.g., -0043, -0063, -0095) assert that warnings and instructions are all that are needed or that warnings and instructions are the only requirements that are likely to avoid injuries. In contrast, one comment (-0179) argues that warnings are not likely to address the hazard effectively, as demonstrated by recent deaths, and that instructing consumers to “check often” is an unreasonable expectation.*

Response: Improper infant positioning accounts for the majority of fatalities associated with these products. The Commission generally recommends designing the hazard out of a product or guarding the consumer from the hazard, rather than employing warnings, because a warning’s effectiveness depends on persuading consumers to alter their behavior to avoid the hazard. Nevertheless, as discussed in the NPR briefing package, staff was unable to develop performance tests or requirements that could address the infant positioning hazard; and therefore, staff concluded that the “last resort” measure of warning about proper and improper infant

positioning was the only feasible hazard-mitigation strategy (see Smith, 2014). Staff continues to believe that this is the only viable way of addressing the infant positioning hazard, short of a ban on slings. However, staff does not agree that warnings and instructions are all that is needed to address injuries with sling carriers. Consequently, the Commission incorporates by reference ASTM F2907-15, which includes performance requirements that are intended to address hazards other than infant positioning.

***Comment:** Sixteen comments address the content of the warning label and instructions, generally in terms of consumer comprehension of the information. These include comments about the importance of the labels and instructions to be understood easily, clear, accurate, pertinent, and to include all necessary information, including information about what to avoid.*

Response: The warnings and instructions must be accurate, comprehensive, and easy to understand, and the Commission believes that the requirements for sling carriers accomplish these goals. Staff worked extensively with the ASTM Subcommittee on Sling Carriers to improve the requirements for warnings and instructions from the original 2012 version of the voluntary standard to address more effectively the sling hazards that cannot be addressed by performance requirements. The current requirements for warning and instructional content adequately address key information about the nature of the hazards, the consequences of exposure to the hazards, and appropriate behaviors in which consumers can and should engage—or not engage—to avoid these hazards. Thus, no revisions to the content requirements are necessary.

***Comment:** Seven comments suggested specific items that should be included in the warnings. Specifically:*

- *Two comments (-0016 & -0058) proposed warning against the use of slings with infants younger than a certain age (i.e., 4 months or 6 months).*
- *Two comments (-0031 & -0118) stated that the warning should include or highlight images of proper positioning, including the acronym TICKS.*
- *One comment (-0079) stated that consumers should be aware of the recommendation to check stitching and fabric for wear.*
- *Two comments (-0038 & -0041) argued that some companies currently include dangerous instructions or positioning information.*
- *One comment (-0172) stated that the current warning does not sufficiently describe the suddenness with which suffocation can occur and the need for constant mindfulness and monitoring. The comment also stated that the fall hazard is not described sufficiently.*

Response: The Commission agrees that the items proposed by the commenters should be included on sling warning labels and concludes that each item is already sufficiently addressed by the warning currently required in ASTM F2907-15. The warning label requirements in ASTM F2907-15, which are incorporated by reference into the final rule, address most issues pertaining to unsafe positioning, by specifying both proper and improper infant positioning in the warning and instructional language and in the warning pictogram.

Comment: *One comment (-0179) states that the warning’s direction to keep the “face uncovered” is weaker than previous warnings by CPSC, and does not address concerns that sling-type carriers can cause infants whose heads are below the rim of the sling to assume a curled posture.*

Response: The Commission disagrees with the assertion that the directive to keep the face uncovered is weaker than an instruction to keep the head above the rim of the sling. CPSC

staff and the ASTM Subcommittee considered a reference about keeping the baby's head above the rim of the sling, but concluded that consumers might have difficulty assessing when an infant's head would be considered "above the rim." Furthermore, young infants may need head support when carried in a sling, and this would require the sling to pass around the back of the baby's head. This scenario is



FIGURE 1. Portion of pictogram example from ASTM F2907 - 14a (Figure 5, referenced in Section 8.3.4).

illustrated in Figure 1. Although this graphic, which appears in the "example pictogram" of the ASTM standard, is intended to show a proper position, consumers may consider the infant's head to be

"below the rim," and therefore, conclude incorrectly that such a position is improper. Given that the warnings already instruct consumers to make sure the infant's body does not curl into a chin-to-chest position, the Subcommittee and CPSC staff agree that warning language instructing consumers to make sure that the infant's face is uncovered and fully visible is sufficient to address the risk of positional asphyxia, and would minimize confusion.

Comment: Fifteen comments specifically discuss the size or length of the warning label and instructions. Many of the comments argued that smaller, shorter, or more "concise" labels and instructions are superior to larger or longer ones, but they provided no particular evidence or rationale to support their arguments. One comment (-0179) stated that manufacturers are producing "unreasonably long" instructions. Two comments (-0003 & -0008) stated that large warning labels hurt the aesthetics of the product; and some comments simply expressed dislike of the idea of a "huge" label (e.g., -0070) or thought that some of the information in the label seemed "a tad much" (-0132). Two comments (-0025 & -0096) claimed that shorter labels and instructions are more effective because they are more likely to be read, understood, noticed, or

followed. Two comments (-0019, -0057) argued that large labels are more likely to be removed by the consumer; and one of these comments (-0019) specifically identified “free-hanging” labels as labels that are likely to be accidentally torn or ripped off, intentionally cut off or removed, or rolled and sewn against a hem to keep it out of the way.

Response: Warnings generally should be physically large, but brief. However, a concise warning is unlikely to be effective if it does not convey all key information pertaining to the hazards—namely, a description of the nature of the hazard, consequences of exposure to the hazard, and how to avoid the hazard. Brevity is only one factor that must be considered by a warning designer, and CPSC staff worked with the ASTM Subcommittee to develop effective warning language that is comprehensive, yet reasonably concise. Staff recognizes that a large label may detract from the aesthetics of the product and that some consumers may feel compelled to remove such a label from the product. However, the alternative would be to create a warning that blends into the product or goes unnoticed by consumers, which would likely offer little-to-no safety benefit. Although the standard requires that warning labels be permanent, CPSC agrees that so-called “free-hanging” labels—that is, labels that are affixed to the product at only one end of the label—are more likely to be torn or ripped off, or otherwise altered by the consumer, and that this would eliminate the potential safety benefit of the label. Additionally, the standard proposed in the NPR does not prohibit such labels or prevent manufacturers from affixing labels to the products in this way. Thus, the final rule includes a requirement that prevents label attachment along a single edge of the label.

The ASTM F2907-15 requirements that are most relevant to this issue are those pertaining to warning label permanency. Section 8.3 of ASTM F2907-15 states that warning labels shall be permanent, and section 5.7 specifies that warning label permanence is determined

by testing in accordance with section 7.3, which includes requirements for labels attached with a seam. Section 5.7 includes two subsections that address permanency requirements for labels that are applied directly to the surface of the sling (5.7.1; *e.g.*, via hot stamping or heat transfer) and a requirement that non-paper labels shall not liberate small parts (5.7.2). The Commission concludes that the following additional subsection (which is included in the final rule) would appropriately address the “free-hanging” label issue:

“5.7.3 Warning labels that are attached to the fabric with seams shall remain in contact with the fabric around the entire perimeter of the label, when the sling is in all manufacturer-recommended use positions.”

On December 14, 2016, staff received a letter from the chair of the ASTM subcommittee indicating the group would be considering this requirement as quickly as possible.

***Comment:** Five comments addressed issues related to the medium through which the warnings and instructions are to be delivered to consumers. Some comments (-0003, -0095, -0172) suggested that the Internet (e.g., the manufacturer's website) should be used to communicate warning and instructional information. One of these (-0003) stated that this approach, combined with providing this information in materials that are supplied with the product, is sufficient, adding that warnings do not need to be on the product at all. Another one of these (-0172) specifically suggested requiring video instructions, available both online and on a CD from the manufacturer, and that the label should include a website address that refers the reader to online instructions. Another (-0058) suggested instructional DVDs and pamphlets as options. One comment (-0016) suggested that the instructions could be a “simple printable card.”*

Response: The Internet or other media, such as CDs or DVDs, can be a useful means of communicating safe baby-wearing information to consumers. However, the Commission believes it is preferable to communicate this information on the product itself, through warning labels, so that such information would be available to consumers throughout the product's full lifecycle, regardless of their access to these other media forms of information. Furthermore, the instructional requirements in ASTM F2907-15 do not specify the media form that the instructions must take; they only specify: "Instructions shall be provided with the sling" (Section 9.1). Thus, instructions may be provided in other than a traditional paper form. Because not all manufacturers maintain an online presence, the rule does not include a mandatory label that requires online instructions; however, there is nothing to prevent a manufacturer from including this information on their label.

Comment: Three comments (-0005, -0177, & -0188) stated that there should be a standard instruction manual or set of guidelines, perhaps ASTM-approved, for all manufacturers. One of these (-0005) seemed to suggest that the current standard already required this.

Response: Sling carriers vary substantially in design, and certain products offer an enormous degree of adjustability. "Wraps," for example, are a type of sling that consists solely of a long length of material that must be tied or knotted, and these products can be wrapped and tied around the caregiver's body in myriad ways. Thus, the Commission does not believe that a standard, universal instruction manual could be developed and applied to all sling carriers. However, section 9 of ASTM F2907-15 (which the rule incorporates by reference) does require instructions to be provided with each sling and for these instructions to include some standard content, including information on assembly, adjustment, restraint systems (if applicable),

maintenance, cleaning, storage, and use. The final rule also requires instructions to contain images of each manufacturer's recommended carrying position, all warnings that are required to be on the product, and additional safety-related instructions and information, such as the minimum and maximum weight of the child for which the sling is intended, the importance of checking for damaged seams and hardware, and a warning never to use the sling when balance or mobility is impaired.

***Comment:** One comment (-0175) stated that section 8.1.1 of ASTM F2907 – 15, for clarity and consistency, should match the corresponding requirement in ASTM F2236 – 14, Standard Consumer Safety Specification for Soft Infant and Toddler Carriers.*

Response: CPSC agrees that consistency among the various juvenile product standards is beneficial to manufacturers and consumers. Staff has worked with the ASTM Ad Hoc Wording Task Group (Ad Hoc task group), consisting of members of the various subcommittees affected by the durable nursery products rules, whose stated mission is to develop uniform and consistent language to be applied to similar portions of various ASTM juvenile product standards. The Ad Hoc task group recently completed draft recommended language for portions of the “Marking and Labeling” section for ASTM juvenile product standards, and the final recommendations are now posted on the ASTM website for consideration by the individual subcommittees.

For uniformity, and to avoid confusion, CPSC staff ordinarily would recommend that the final rule include a provision that differs from section 8.1.1 of ASTM F2907-15 so that it is consistent with the Ad Hoc task group recommendation. However, the current voluntary standard includes a requirement that the product be marked with the website, if applicable. The analogous Ad Hoc task group requirement includes no such mandate. One possible resolution would be to

use the Ad Hoc task group recommendation, but add the website as an additional required element. However, this change would result in a requirement whose content is identical to the current voluntary standard requirement. Given this finding and staff's belief that retaining the website marking requirement is important, staff did not recommend that the mandatory rule differ from this section of ASTM F2907. Staff believes that it would be more appropriate to refrain from incorporating the Ad Hoc task group recommendations until the ASTM subcommittee considers future revisions to the standard. The final rule follows this approach.

L. Periodic testing: costs, frequency, and necessity

Comment: *Because of the large economic burden of the testing requirements for low-volume producers, several commenters (e.g., -0099, -0177, -0166, -0178, -0175) suggested that the Commission consider a testing schedule based on production interval (e.g., every 500 slings), rather than on an annual timeline (e.g., every year). These commenters suggested that because of the low volumes of the very small producers, safety did not require annual testing.*

Response: As described in the FRFA, small manufacturers that establish production testing plans, which need not be complicated, would be required to conduct periodic testing every 2 years, rather than every year. The FRFA also discusses other regulatory alternatives for Commission consideration that could further limit periodic testing for low-volume manufacturers, and that could substantially reduce periodic testing costs. One alternative discussed in the FRFA would require, for manufacturers *with established production testing plans*, would require third party periodic testing only after a certain number of units of a product had been produced, even if it meant that periodic third party tests would be conducted less often than every 2 years. However, although this regulatory alternative could substantially reduce the

costs of periodic testing, it would require a modification in the testing and certification rule (16 CFR part 1107) before it could be implemented.

***Comment:** Three comments requested that the government provide financial assistance to small businesses to cover third party testing costs or for “taxpayer-funded” testing.*

Response: Congress has not provided CPSC with the authority to conduct premarket testing or to provide government assistance for manufacturers’ test programs.

***Comment:** Two comments suggested that small businesses should be allowed, as a group, to submit fabric for testing. This means that the group could “submit a SINGLE testing piece for each category and have the approval apply to each business so that the cost of testing can be shared.” (-0189)*

Response: Commenters, such as the ones above, may be confusing the testing that would be required by ASTM F2907 with other CPSC testing requirements for children’s products. In the case of lead and phthalates, component testing and certification are allowed. However, ASTM F2907 establishes performance test requirements for the product as a whole because it is more than a simple fabric strength test. Other factors that may contribute to a sling passing or failing the performance tests include: the size and shape of the sling, any hardware, and the instructions that accompany the sling (because the tests are “per manufacturer instructions”).

***Comment:** One comment suggested “pricing [the 3rd party testing] according to output would make sure out [sic] pieces follow regulations while keeping big and small manufacturers running.” (-0149)*

Response: The price charged by third party testing laboratories is not set or regulated by CPSC.

Comment: *Eleven comments requested specific changes to the periodic testing requirements. Four commenters specifically requested testing bi-annually (e.g., “allowing for testing every 2 years or only when there is a material change,” noting: “It’s possible to tweak the testing requirements in ways that would not be overly onerous to small business owners (testing every other year, only when there is a change of materials, etc.)”)*

Six commenters, including the four previous commenters, suggested testing should be required only when a material change occurs. One commenter requested testing every 3 years (“testing should be limited to a manufacturing level achieved by a large manufacturer, or every three years, whichever comes sooner.”); and four commenters suggested a period less frequent than annually, but with no specific timeframe suggested (e.g., “Third party testing should not need to occur yearly”; “require testing either every year OR every 500 wraps. . .”; “modifying the testing schedule so that testing does not need to be re-done annually for established manufacturers who don't have a material change in the supply chain”).

One commenter suggested bulk testing of fibers and woven fabric. One commenter suggested: “basic licensure or proof of competency per manufacturer/weaver,” in lieu of periodic testing. Two commenters stated that they were unsure what would constitute a material change.

Response: CPSC agrees that testing every other year (instead of annual testing) represents a potentially meaningful reduction in the burden of third party testing costs. Such an approach is already permitted under an existing CPSC regulation, if certain basic conditions are satisfied. Subpart C of 16 CFR part 1107 requires periodic testing of children’s products, including the third party certification testing for durable nursery products. This testing must be conducted at a minimum of 1-, 2-, or 3-year intervals, depending upon whether the manufacturer

has a periodic testing plan (1 year), a production testing plan (2 years), or plans to conduct continued testing using an accredited ISO/IEC 17025:2005 laboratory (3 years). Periodic testing is required even if no material changes have occurred in the children's product. Regarding the suggestion to conduct third party testing after a fixed production volume (*i.e.*, 500 units), third party testing is required on a 1-, 2-, or 3-year period, irrespective of the production volume.

The commenter suggesting bulk testing of fibers and woven fabric is referring to component part testing, which is allowed and described in 16 CFR part 1109, Conditions and Requirements for Relying on Component Part Testing or Certification, or Another Party's Finished Product Testing or Certification, to Meet Testing and Certification Requirements. Third party test results of bulk component material may be used for certification purposes for all products using the bulk material to which the tests apply.

Additionally, 16 CFR 1107.23 requires that the certification testing be repeated whenever the manufacturer makes a material change in the product. A material change is defined in 16 CFR 1107.2 as:

“... any change in the product's design, manufacturing process, or sourcing of component parts that a manufacturer exercising due care knows, or should know, could affect the product's ability to comply with the applicable rules, bans, standards, or regulations.”

As described in 16 C FR1107.21(c)(2), a production testing plan is a written plan describing actions taken by a manufacturer, other than third party testing, to help ensure continued compliance of a children's product. This written plan would include a description of the actions, (*e.g.*, incoming inspection of raw materials, first party testing, in-factory quality assurance/quality control (QA/QC) systems) that a manufacturer uses to control for potential

variability in its production process that could affect the product's compliance. Although some testing is still required in a production testing plan, the test methods employed are not required to be CPSC-accepted test methods, nor must the testing be completed by a CPSC-accepted laboratory. 16 CFR 1107(a)(2). Additionally, 16 CFR part 1107 does not require manufacturers necessarily to use destructive tests and permits manufacturers to "tailor" the tests to the needs of the product. For commenters who specifically requested biannual testing, or who suggested testing yarns and fabrics, rather than whole products, annually, the application of a production test plan is an option currently available provided they establish a production test plan that meets the requirements of 16 CFR part 1107(c)(2).

All product changes are not necessarily material changes. Only changes that a manufacturer, exercising due care, knows, or should know, could affect the product's ability to comply with the requirements are material changes. Therefore, for a hand weaver, this requirement may mean that a change in yarn alone is not necessarily a material change, unless the new yarn could affect the compliance of the finished product. For example, sourcing yarn from a different supplier is considered a material change because the hand weaver cannot assume that the new yarn has the same mechanical properties as previously used yarns. Furthermore, only the rules affected by a material change require third party testing. For example, if a hand weaver changes the color of a yarn, unless the coloring process affects the mechanical strength of the yarn, material change testing to ASTM F2907 section 7.1, Static Load Test, is not required.

Periodic testing frequency is determined outside this particular rule by 16 CFR part 1107, which is outside the current rulemaking effort.

Regarding the comment requesting "basic licensure or proof of competency per manufacturer/weaver," this is not an option available to the Commission because it is not within

the jurisdiction of the CPSC to conduct pre-market testing or certify manufacturers for any industry. Consequently, the final rule does not make such a change.

Comment: One commenter proposed, and several others referenced or quoted the comment, that CPSC should: “Require specific recordkeeping. Manufacturers would need to keep a record of these compliant materials for review” as a “quicker [sic], less costly, and less destructive way to maintain compliance.”

Response: Record keeping related to the testing and certification of children’s products is already required under 16 CFR 1107.26.

Comment: Eleven commenters requested that the Commission consider exemptions for certain types of fabrics or provide a guideline for fiber content, yarn weights, thread count, weave structures and fabric weights to be used for slings.

Specifically, one comment (CPSC-2014-0018-0070) stated: “There are already weight standards in place that determine whether a textile shall be tested for flammability. This is because previous tests have determined that a fabric over a certain weight does not pose a flammability risk. I believe a similar standard could be determined to provide a guideline for what characteristics of cloth (sett, ppi, fiber content) make for a suitable textile to be used as an infant sling. Anything produced outside these tested and approved parameters could be tested to insure [sic] compliance with the standard.”

Response: Although the Standard for the Flammability of Clothing Textiles (16 CFR part 1610) provides exemptions from flammability testing for certain types of fabrics, such as “plain surface fabrics, regardless of fiber content, weighing 2.6 ounces per square yard or more,” the exemptions in 16 CFR part 1610 are based on years of test experience and data. CPSC staff tested approximately 40 slings, to date. However, at this time, these tests do not provide

sufficient data to determine guidelines or exemptions regarding fabric integrity for the fabrics to be used for slings. CPSC could consider this issue in the future, when more test experience and sufficient data are gathered.

***Comment:** We received one comment regarding flammability testing. This comment (-0014) stated: “I question the need for the flammability testing. None of the injuries or fatalities was related to fire. In any event, we are just talking about woven pieces of cloth here, no different than other, less regulated, fabrics used for ordinary clothing.”*

Response: ASTM F2907-15 states:

(a) 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 part 1610.

The regulation at 16 CFR part 1610 is the standard that regulates clothing textile flammability, Standard for the Flammability of Clothing Textiles. Woven fabrics used for slings are in the same category of clothing textiles. Accordingly, they also need to pass the clothing flammability standard. Part 1610 provides exemptions for certain types of fabrics, and the majority of fabrics used for slings are heavier and of the type already exempted from flammability testing. Therefore, a sling that uses plain-surface fabric weighing 2.6 oz./sq. yard or more, or fabrics derived from any of the following fibers or created entirely from a combination of these fibers: acrylic, modacrylic, nylon, olefin, polyester, and wool, will meet the requirements of the standard without flammability testing. Only products that are “incapable of being evaluated to the requirements of 16 CFR 1610” are required to undergo flammability tests under 16 CFR 1500.3(c)(6)(vi).

M. Miscellaneous other

Comment: *One comment questioned the estimate that staff determined under the Paperwork Reduction Act. The commenter stated: “It may not be accurate to call the time and costs associated with preparing instructional literature usual and customary. To date baby sling manufacturers have not be [sic] required to supply instructional literature. Many BCIA Members provide BCIA babywearing safety information with their products in lieu of instructional literature, so it may be fair to say that this literature will need to be developed due to the implementation of this standard.”*

Response: The rule requires manufacturers to provide instructional material. Sling manufacturers that already provide such information, estimated by the BCIA to be about one-third of the industry (about 135 manufacturers), may have to modify their existing instructions to make sure that the instructions have all the content required by ASTM. The additional effort would probably be modest, an estimated 5 hours, if estimates for revisions to instructions for other children’s products are comparable. Using an hourly rate of \$33.29 to calculate these costs, the total compensation for sales and office workers in private industry in goods-producing industries would amount to about \$166 ($\33.29×5) per firm.

The BCIA estimated that firms that had not previously prepared instructions would require 30 to 60 hours of labor, and/or paid consultants, as well. If the remaining 265 firms require 45 hours, on average, then the impact per-firm would be about \$1,500 ($\33.29×45). Thus, the cost could average \$166 for firms that already provide the literature and \$1,500 for those that do not. Once the literature has been created, it would not need to be modified, unless the manufacturer makes changes to a model that renders portions of the literature obsolete.

However, the cost of subsequent modifications to the literature is likely to be less than the cost of its initial design.

Comment: Seven comments requested variations of a ban. Specifically:

- *Two comments requested a ban of all sling carriers;*
- *Four comments requested bans of certain types of sling carriers. Three of these mentioned “bag style” sling carriers), urging: “[i]t would make the most sense to ban the manufacture of all bag slings (as in the type of sling involved in the Infantino recall) rather than punish those making perfectly safe wraps and ring slings with unnecessary regulation” (-0085) and “[a]pprove specific bans on dangerous types of carriers. As stated previously, bag style sling carriers are notoriously (anecdotally?) more dangerous than ring slings or woven wraps,” (-0131).*
- *One comments requested a ban on buckles used in sling carriers, specifically: “[b]an buckles in this class of carrier, as well as the bag style slings.”(-0087).*

Response: Section 104 of CPSIA does not permit the Commission to ban products. In addition, although there was a recall related to deaths in one certain type of “bag-style” sling, this is not the only type of sling for which fatal incidents have been reported. Fatal incidents have also been reported in wrap and ring slings. Regarding the request specifically to ban buckles “in this class of carriers,” the test methods in the standard are designed to test any hardware for slings, including buckles. Some designs use buckles for adjustment, and the standard is designed to identify buckles that are not strong enough.

VII. Final Rule

A. Final Rule for Part 1228 and Incorporation by Reference

Section 1228.2(a) of the final rule provides that sling carriers must comply with ASTM F2907-15. The rule incorporates the ASTM standard by reference with one modification. The rule modifies the ASTM standard to address concerns about the ease with which required warning labels can be removed if attached by only one seam. The Commission determines that this modification to ASTM F2907-15 is more stringent than the voluntary standard and would further reduce the risk of injury associated with sling carriers.

The Office of the Federal Register (OFR) has regulations concerning incorporation by reference. 1 CFR part 51. These regulations require that, for a final rule, agencies must discuss in the preamble of the rule the way that the materials the agency incorporates by reference are reasonably available to interested persons and how interested parties can obtain the materials. In addition, the preamble of the rule must summarize the material. 1 CFR 51.5(b).

In accordance with the OFR's requirements, the discussion in this section summarizes the provisions of ASTM F2907-15. Interested persons may purchase a copy of ASTM F2907-15 from ASTM, either through ASTM's website, or by mail at the address provided in the rule. A copy of the standard may also be inspected at the CPSC's Office of the Secretary, U.S. Consumer Product Safety Commission, or at NARA, as discussed below. We note that the Commission and ASTM arranged for commenters to have "read-only" access to ASTM F2907-15 during the NPR's comment period.

ASTM F2907-15 contains requirements covering:

- Laundering;
- Hazardous sharp points or edges;
- Small parts;
- Lead in paint;

- Wood parts;
- Locking and latching mechanisms;
- Warning labelling;
- Openings;
- Scissoring, shearing, and pinching;
- Monofilament threads; and
- Flammability.

The standard additionally contains test methods that must be used to assess conformity with these requirements, as were discussed in detail in section IV.B.1. of the sling carrier NPR.

B. Amendment to 16 CFR Part 1112 to Include NOR for Sling Carriers

The final rule amends part 1112 to add a new section 1112.15(b)(39), which lists 16 CFR part 1228, *Safety Consumer Safety Specification for Sling Carriers*, as a children's product safety rule, for which the Commission has issued an NOR. Section XIII of this preamble provides additional background information regarding certification of sling carriers and issuance of an NOR.

VIII. Effective Date

The Administrative Procedure Act (APA) generally requires that the effective date of a rule be at least 30 days after publication of the final rule. 5 U.S.C. 553(d). Without evidence to the contrary, CPSC generally considers 6 months to be sufficient time for suppliers to come into compliance with a new standard; and a 6-month effective date is typical for other CPSIA section 104 rules. Six months is also the period that JPMA typically allows for products in the JPMA certification program to transition to a new standard once that standard is published.

However, given the large number of very small suppliers who will potentially experience significant economic impacts, in addition to the lack of established history of compliance with the voluntary standard, the rule provides a 12-month effective date. The Commission proposed a 12-month effective date in the NPR, and received six comments on the proposed effective date; all but one agreed that 12 months was an appropriate effective date for this product. Notably, comments supporting the proposed 12-month effective date included comments from the SBA's Office of Advocacy.

The safety standard for sling carriers and the corresponding changes to part 1112 regarding requirements for third party conformity assessment bodies will become effective 12 months after publication of the final rule in the Federal Register.

IX. Regulatory Flexibility Act

A. Introduction

The Regulatory Flexibility Act (RFA), 5 U.S.C. 601-612, requires that agencies review a proposed rule and a final rule for the rule's potential economic impact on small entities, including small businesses, and identify alternatives that may reduce such impact. Section 604 of the RFA generally requires that agencies prepare a final regulatory flexibility analysis (FRFA) when promulgating final rules, unless the head of the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. The NPR included an initial regulatory flexibility analysis (IRFA), describing the possible impacts of the proposed rule on small entities. Specifically, the FRFA must contain:

- A statement of the need for, and objectives of, the rule.

- A statement of the significant issues raised by the public comments in response to the IRFA. A statement of the assessment of the agency of such issues, and a statement of any changes made in the proposed rule as a result of such comments.
- The response of the agency to any comments filed by the Chief Counsel for Advocacy of the Small Business Administration in response to the proposed rule and a detailed statement of any change made to the proposed rule in the final rule as a result of the comments.
- A description of and an estimate of the number of small entities to which the rule will apply or an explanation of why no such estimate is available.
- A description of the projected reporting, recordkeeping, and other compliance requirements of the rule, including an estimate of the classes of small entities necessary for preparation of the report or record.
- A description of the steps the agency has taken to minimize the significant economic impact on small entities consistent with the stated objectives of applicable statutes, including a statement of the factual, policy, and legal reasons for selecting the alternative adopted in the final rule and why each of the other significant alternatives to the rule considered by the agency which affect the impact on small entities was rejected.

B. Reason for Agency Action and Legal Basis for the Final Rule

The Danny Keysar Child Product Safety Notification Act, section 104 of the CPSIA, requires the CPSC to promulgate mandatory standards for nursery products that are substantially the same as, or more stringent than, the voluntary standard. The Commission worked closely

with ASTM to develop the new requirements and test procedures that have been incorporated into ASTM F2907–15, which the Commission incorporates by reference.

C. Compliance Requirements of the Rule

The Commission is incorporating by reference the current voluntary standard, with one modification regarding label attachment, to form the final rule. Some of the more significant requirements of the current voluntary standard for sling carriers (ASTM F2907–15) include static and dynamic load testing to check structural integrity of the sling carriers, and occupant-retention testing to check that the child is not ejected from the sling carrier. The standard requires that the buckles, fasteners, and knots that secure the sling carrier remain in position before and after these three performance tests. There is also a separate restraint-system test to help ensure that any restraints used by the sling do not release while in use.

The voluntary standard also includes requirements to address the following issues:

- Sharp points and edges,
- small parts,
- marking and labeling requirements,
- flammability requirements,
- requirements for the permanency and adhesion of labels, and
- requirements for instructional literature.

The rule requires warning labels with specific language in the warnings and specifications for the size and color of the labels. The updated warning statements are intended to provide additional details of the fall and suffocation hazards in an effort to address those hazards. The rule requires manufacturers to provide with their slings instructional literature containing

additional warnings not required on labels; the rule does not specify the format of the instructions.

D. Other Federal Rules

CPSC has not identified any federal or state rule that either overlaps or conflicts with the final rule.

E. Impact on Small Businesses

In the NPR, CPSC reported that it had identified 47 suppliers of sling carriers to the U.S. market, including 33 companies based in the United States and 14 foreign companies that exported directly to the U.S. customers via Internet sales or sales to U.S. retailers. The 33 U.S.-based firms included 25 manufacturers, four importers, and four firms for which the supply source was not identified. The NPR also noted that “there may be hundreds more suppliers that produce small quantities of slings.” Since the NPR, information provided by the BCIA confirms the role of numerous small and very small artisanal manufacturers in the sling market. The BCIA has identified more than 324 U.S. manufacturers of slings, wraps, and pouches, including both members and non-members of BCIA. The firms identified by BCIA overlap only partially with the 47 suppliers identified by CPSC staff. The BCIA has also identified some additional hand weavers. Thus, the total number of manufacturers may be about 400.

Because SBA guidelines pertain to U.S.-based entities, this analysis is limited to domestic firms. Under SBA guidelines, a manufacturer of sling carriers is “small” if it has 500 or fewer employees; and importers and wholesalers are “small” if they have 100 or fewer employees. Based on these guidelines, all of the manufacturers, except one (with a large parent corporation), appear to be small businesses. These small businesses consist of approximately 400 U.S. based manufacturers and an unknown number of importers. In addition, there is a subset of

these small businesses that we describe as “very small businesses,” which are manufacturers with a single person or a couple working out of the home, with annual revenues of less than \$50,000. For analysis, we refer to these suppliers as “very small manufacturers” to distinguish them from the more established manufacturers; however, this is not an official SBA designation.

The Juvenile Products Manufacturers Association (JPMA) and the BCIA have offered assistance to member manufacturers on testing and compliance with the ASTM sling carrier standards. However, the ASTM F2907 sling carrier standards are relatively new, and therefore, there is no established history of conformance to the standard among manufacturers. An email from the head of the BCIA on October 27, 2015 confirms the irregular nature of conformance with various provisions of the F2907 standard.

As of October 2016, only one manufacturer is listed on the JPMA website as certified compliant. Some manufacturers claim to be “CPSIA compliant,” but that may refer only to requirements for lead, flammability, labeling, small parts, and sharp edges and not necessarily the ASTM standard. Based on our review of small firm websites, a conversation with a small ring sling manufacturer, and a draft magazine article by a small nursing wrap producer, we have identified three additional firms that have conducted testing to some version of the ASTM standard, for a total of four firms. If these four firms already comply fully with the ASTM standard, they should not need to make any additional product changes due to the rule.

For manufacturers that do not already conform, it is difficult to assess the cost impact of the physical changes required for compliance with the standard; this will vary with different product designs and materials. Some of the fabrics currently used in slings include cotton, linen, polyester, modal (a cellulosic-like rayon), silk, bamboo, and various blends of fibers. There are a variety of different designs, some patented. At least one firm has redesigned its products to be

subject to the soft carrier standard, rather than the sling standard. Currently, the precise cost of product changes necessary to satisfy testing under the ASTM standard is unknown. Additionally, according to the SBA, stakeholders that contacted the SBA do not agree that the costs to meet the requirements of the ASTM standard will necessarily be minimal. Consequently, we cannot rule out the potential for costs associated with the physical changes to lead to significant economic impacts, especially for very small manufacturers.

In addition to complying with the mechanical requirements of the rule, under section 14 of the CPSA, sling carriers will be subject to third party testing and certification. Once the new requirements become effective, all manufacturers will be subject to the additional costs associated with third party testing and certification requirements under the testing rule, *Testing and Labeling Pertaining to Product Certification* (16 CFR part 1107). These costs will include any physical and mechanical tests required by the final rule. Lead and phthalates testing, if applicable, are already required; hence, lead and phthalates testing are not part of this analysis.

The majority of the costs associated with the rule will likely be related to testing. Few of the sling carrier manufacturers have the technical capability or the equipment in-house to conduct many of the tests required by the standard, especially the dynamic-load, occupant-retention, and restraint-system tests. Therefore, most small and very small manufacturers will likely have to rely on third party testing during product development and could incur significant testing costs by simply pre-testing to determine initially whether their products comply with the standard and then retesting their products if the designs have to be modified to comply.

According to a BCIA representative, third party testing to the ASTM sling carrier voluntary standard, under the requirements of the *Testing and Certification Rule*, could cost around \$510–\$1,050 per model sample. Third party testing costs consists of two parts: (1) the

testing costs unique to F2907 associated with the dynamic-load test, the static-load test, the occupant-retention test, and the restraints test; and (2) the general testing costs associated with testing for flammability, small parts, sharp edges, instructions, and labels. The testing costs unique to sling carriers vary widely, from \$210 to \$650, depending on whether the testing is done in China or in the United States, and on whether a discount, such as those negotiated by the BCIA for its members, is applied. The general testing costs may amount to \$300 to \$400 per test. The very small firms that manufacture in the United States will likely also test in the United States to avoid logistical difficulties, thus incurring higher costs.

Because very small firms likely will have their products tested in the United States, their costs will be higher than the minimum testing cost of \$510 per model sample. Therefore, we use a testing fee of \$700 per sample to conduct our analysis of impacts. The \$700 would cover all elements of the required testing, including flammability, small parts, sharp edges, instructions, and labels. However, the cumulative effect of the various physical tests, which will be done on a single sample in the order specified in the standard, will render the tested sling unsellable, which adds to the impact of the rule. One commenter estimated that there are 100 domestic hand weavers and 50 foreign hand weavers of slings. For hand-woven slings, for example, the hand weaver will lose the revenue from a \$200 to \$800 sling, due to the destructive nature of testing. The loss of revenue represents a direct cost of testing and must be considered when evaluating impacts.

Section 9 of ASTM F2907 requires instructions to be provided with each sling and for these instructions to include some standard content, including information on contacting the manufacturer, assembly, adjustment, restraint systems (if applicable), maintenance, cleaning, storage, and use. The final rule also requires instructions to contain images of each

manufacturer's recommended carrying position, all warnings that are required to be on the product, and additional safety-related instructions and information, such as the minimum and maximum weight of the child for which the sling is intended, the importance of checking for damaged seams and hardware, and never using the sling when balance or mobility is impaired.

Sling carrier manufacturers that already provide such information, estimated by the BCIA to be at about one-third of the industry, or approximately 135 manufacturers, may have to modify their existing instructions to make sure the instructions have all the content required by ASTM. The additional effort would probably be modest, estimated at 5 hours, if estimates for revisions to instructions for other children's products are comparable. Using an hourly rate of \$33.29 to calculate these costs, the total compensation for sales and office workers in private industry in goods-producing industries would amount to about \$166 ($\$33.29 \text{ per hour} \times 5 \text{ hours}$) per firm.

The BCIA estimated that firms that had not previously prepared instructions would require 30 to 60 hours of labor, and possibly outside advice, as well. If the remaining 265 firms require 45 hours, on average, then the impact per firm would be about \$1,500 ($\$33.29 \text{ per hour} \times 45 \text{ hours}$). Thus the cost could average \$166 for firms that already provide the literature and \$1,500 for those that do not. Once the literature has been created, it would not have to be modified, unless the manufacturer makes changes to a model that render portions of the literature obsolete. The cost of subsequent modifications to the literature is likely to be less than the cost of its initial design.

Based upon our analysis of data provided by the BCIA, the initial certification tests, the periodic tests (individually and in combination), and the cost of instructional material are likely to have a significant impact on all but mass producers of slings, and could cause numerous very

small producers to exit the market. Similarly, small importers will also be subject to third party testing and certification requirements. Consequently, these importers will experience the associated costs of compliance. The resulting costs could have a significant impact on these small importers. Additionally, according to the SBA, stakeholders that contacted the SBA do not agree (as suggested in the initial regulatory flexibility analysis) that the costs to meet the requirements of the ASTM standard will necessarily be minimal. Accordingly, we conclude that the final rule will likely have a significant impact on a substantial number of small entities.

F. Alternatives

The Commission has considered several alternatives that may potentially reduce the impact of the final rule on small businesses. These alternatives are:

- *Adopting the voluntary standard without change and working with ASTM to improve durability/attachment of warning labels in a future revision of the voluntary standard.* This alternative could marginally reduce the impact of the rule on small businesses. Section 104 of the CPSIA requires that the Commission promulgate a standard that is either substantially the same as the voluntary standard, or more stringent if the Commission determines that a more stringent standard would further reduce injuries associated with the product. Therefore, adopting ASTM F2907-15, with no modifications, would be the least stringent rule allowable; however, the modification to the standard regarding label attachment would further reduce the risk of injury associated with sling carriers.
- *Delaying the effective date of the requirements beyond 12 months.* Typically, the Commission provides a 6-month effective date for durable nursery product rules. For this rule, the Commission proposed a 12-month effective date, and provides

that period in the final rule. One alternative that could reduce the impact on small firms would be to set an effective date later than 12 months. Implementing a later effective date could mitigate the effects of the rule on small businesses by delaying the need to conduct third party certification tests and allowing the businesses to spread the costs of bringing their slings into conformance over a longer period. This alternative, however, would only delay, not alleviate the effects of the rule. Moreover, commenters generally favored the 12-month effective date.

- *Exempting wraps from the standard.* Although the testing conducted by Laboratory Sciences has been very limited, laboratory staff found no wraps (*i.e.*, simple rectangular pieces of woven or knitted fabric) that fail tests for static- and dynamic-load testing, which check for structural integrity, nor did staff find any wraps that failed the tests for occupant retention, which are used to check that the child is not ejected from the sling carrier. No injuries involving wraps have been identified that involve structural fabric weaknesses. Given that improper infant positioning is the primary hazard associated with sling carriers and that this hazard is addressed in the rule exclusively through the use of warnings, staff concludes that excluding wraps from education, instruction, and labeling may be ill-advised.
- *Providing an exemption for small batch manufacturers from the testing requirements proposed under the rule,* if permissible, this approach would exempt from the rules testing requirements for the large number of very small businesses in the sling market. Under Section 14(d)(4)(C)(ii) of the CPSA, however, the

Commission cannot “provide any alternative requirements or exemption” from third party testing for “durable infant or toddler products,” as defined in section 104(f) of the Consumer Product Safety Improvement Act of 2008.

- *Amending 16 part 1107 to reduce the frequency of periodic testing for small or home based sling producers.* Currently, under the requirements of 16 CFR 1107.21, small home-based businesses that produce sling carriers must conduct *periodic* third party tests every year, or, if they have a formal production testing plan, every two years. The testing costs associated with third party *periodic* testing could be substantially reduced if the Commission amended existing regulations to allow small home based sling producers to conduct periodic testing less frequently. The details of this option that the Commission could consider at a later date would need to be determined by the Commission separately; it might apply to all nursery products, or it might be limited to sling carriers. However, all home-based firms would still be required to: (1) produce conforming products; (2) conduct the initial certification tests (16 CFR 1107.20); (3) re-certify whenever there is a material change to the product (16 CFR 1107.23); and (4) implement a production testing plan and conduct on going production tests (16 CFR 1107.21(c)). This is not an alternative to the rule, but a possible additional action.
- *Determining that Slings are not Durable Products.* The Commission could determine that sling carriers, or some subset of sling carriers such as wraps, do not constitute a durable infant or toddler product. The definition of what constitutes a durable product, and the degree to which empirical and anecdotal evidence on sling carriers conforms to these definitions was discussed in the 2014 NPR

briefing package. Because the Commission has previously issued a regulation defining “durable infant or toddler product” to include sling carriers, this alternative would require additional Commission regulatory action. Under this alternative, while there would be no mandatory standard, the voluntary standard would still exist and enforcement actions, such as recalls under Section 15 of the CPSA, would still be available. Notwithstanding, for the reasons stated in the 2014 NPR briefing package and reiterated herein, because the Commission has previously issued a regulation defining “durable infant or toddler product” to include “infant slings,” and staff conducted a lengthy analysis at the notice of proposed rulemaking staged which concluded that sling carriers are durable infant carriers, the Commission believes that not regulating would not meet the requirements under Section 104 to promulgate a standard that is substantially the same or more stringent than the current voluntary standard.

X. Environmental Considerations

The Commission’s regulations address whether the agency is required to prepare an environmental assessment or an environmental impact statement. Under these regulations, a rule that has “little or no potential for affecting the human environment,” is categorically exempt from this requirement. 16 CFR 1021.5(c)(1). The final rule falls within the categorical exemption.

XI. Paperwork Reduction Act

This rule contains information collection requirements under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501–3521). The preamble to the proposed rule discussed the information collection burden of the proposed rule and specifically requested comments on our

estimates. Sections 8 and 9 of ASTM F2907-15 contain requirements for marking, labeling, and instruction literature. These requirements fall within the definition of “collection of information,” as defined in 44 U.S.C. 3502(3).

The Commission received one comment on regarding the information collection of this rule, discussed in section VI.M of this document.

OMB has not yet assigned a control number to this information collection. We will publish a notice in the **Federal Register** providing the number when we receive approval from OMB. This final rule makes modifications regarding the information collection burden because the number of estimated suppliers subject to the information collection burden has increased since publication of the NPR. Accordingly, the estimated burden of this collection of information is modified as follows:

Table 1 – Estimated Annual Third-Party Disclosure Burden

| | 16 CFR Section | Number of Respondents | Frequency of Responses | Total Annual Responses | Hours per Response | Total Burden Hours |
|--|----------------|-----------------------|------------------------|------------------------|--------------------|--------------------|
| | 1228 | 400 | 3 | 1200 | 11.5 | 13,800 |

XII. Preemption

Section 26(a) of the CPSA provides that when a consumer product safety standard is in effect and applies to a risk of injury associated with a consumer product, no state (or political subdivision) may establish or continue a provision of a standard or regulation that prescribes requirements for the performance, composition, contents, design, finish, construction, packaging, or labeling of the product dealing with the same risk of injury, unless the state requirement is identical to the federal standard. Section 26(c) of the CPSA also provides that states or political subdivisions of states may apply to the Commission for an exemption from this preemption

under certain circumstances. Section 104(b) of the CPSIA refers to the rules to be issued under that section as “consumer product safety rules.” Therefore, the preemption provision of section 26(a) of the CPSA would apply to a rule issued under section 104.

XIII. Amendment to 16 CFR Part 1112 to Include Notice of Requirements (NOR) for Sling Carriers

Section 14(a) of the CPSA imposes the requirement that products subject to a consumer product safety rule under the CPSA, or to a similar rule, ban, standard, or regulation under any other Act enforced by the Commission, must be certified as complying with all applicable CPSC-enforced requirements. 15 U.S.C. 2063(a). Section 14(a)(2) of the CPSA requires that certification of children's products subject to a children's product safety rule be based on testing conducted by a CPSC-accepted, third party conformity assessment body. Section 14(a)(3) of the CPSA requires the Commission to publish a NOR for the accreditation of third party conformity assessment bodies (or laboratories) to assess conformity with a children's product safety rule to which a children's product is subject. The *Standard Consumer Safety Specification for Sling Carriers*, to be codified at 16 CFR 1228, is a children's product safety rule that requires the issuance of an NOR.

The Commission published a final rule, *Requirements Pertaining to Third-Party Conformity Assessment Bodies*, 78 FR 15836 (March 12, 2013), which is codified at 16 CFR part 1112 (referred to here as part 1112). This rule became effective on June 10, 2013. Part 1112 establishes requirements for accreditation of third-party conformity assessment bodies (or laboratories) to test for conformance with a children's product safety rule in accordance with section 14(a)(2) of the CPSA. Part 1112 also codifies a list of all of the NORs that the CPSC had published at the time part 1112 was issued. All NORs issued after the Commission

published part 1112, such as the standard for sling carriers, require the Commission to amend part 1112. Accordingly, the Commission is now amending part 1112 to include the standard for sling carriers in the list of other children's product safety rules for which the CPSC has issued NORs.

Laboratories applying for acceptance as a CPSC-accepted third-party conformity assessment body to test to the new standard for sling carriers would be required to meet the third-party conformity assessment body accreditation requirements in 16 CFR part 1112, *Requirements Pertaining to Third-Party Conformity Assessment Bodies*. When a laboratory meets the requirements as a CPSC-accepted third-party conformity assessment body, the laboratory can apply to the CPSC to have 16 CFR part 1228, *Standard Consumer Safety Specification for Sling Carriers*, included in its scope of accreditation of CPSC safety rules listed for the laboratory on the CPSC Web site at: www.cpsc.gov/labsearch.

As required by the RFA, staff conducted a FRFA when the Commission issued the part 1112 rule (78 FR 15836, 15855-58). Briefly, the FRFA concluded that the accreditation requirements would not have a significant adverse impact on a substantial number of small test laboratories because no requirements were imposed on test laboratories that did not intend to provide third-party testing services. The only test laboratories that were expected to provide such services were those that anticipated receiving sufficient revenue from the mandated testing to justify accepting the requirements as a business decision. Moreover, a test laboratory would only choose to provide such services if it anticipated receiving revenues sufficient to cover the costs of the requirements.

Based on similar reasoning, amending 16 CFR part 1112 to include the NOR for the sling carriers standard will not have a significant adverse impact on small test laboratories. Moreover,

based upon the number of test laboratories in the United States that have applied for CPSC acceptance of accreditation to test for conformance to other mandatory juvenile product standards, we expect that only a few test laboratories will seek CPSC acceptance of their accreditation to test for conformance with the sling carrier standard. Most of these test laboratories will have already been accredited to test for conformity to other mandatory juvenile product standards, and the only costs to them would be the cost of adding the sling carrier standard to their scope of accreditation. For these reasons, the Commission certifies that the NOR amending 16 CFR part 1112 to include the sling carriers standard will not have a significant impact on a substantial number of small entities.

List of Subjects

16 CFR Part 1112

Administrative practice and procedure, Audit, Consumer protection, Reporting and recordkeeping requirements, Third-party conformity assessment body.

16 CFR Part 1228

Consumer protection, Imports, Incorporation by reference, Infants and children, Labeling, Law enforcement, and Toys.

For the reasons discussed in the preamble, the Commission amends Title 16 of the Code of Federal Regulations as follows:

PART 1112—REQUIREMENTS PERTAINING TO THIRD PARTY CONFORMITY ASSESSMENT BODIES

1. The authority citation for part 1112 continues to read as follows:

Authority: 15 U.S.C. 2063; Pub. L. 110-314, section 3, 122 Stat. 3016, 3017 (2008).

2. Amend § 1112.15 by adding paragraph (b)(39) to read as follows:

§ 1112.15 When can a third party conformity assessment body apply for CPSC acceptance for a particular CPSC rule and/or test method?

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(b) * * *

(39) 16 CFR part 1228, Safety Standard for Sling Carriers.

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3. Add part 1228 to read, as follows:

PART 1228-SAFETY STANDARD FOR SLING CARRIERS

Sec.

1228.1 Scope.

1228.2 Requirements for sling carriers.

Authority: The Consumer Product Safety Improvement Act of 2008, Pub. L. 110-314, § 104, 122 Stat. 3016 (August 14, 2008); Pub. L. 112-28, 125 Stat. 273 (August 12, 2011).

§ 1228.1 Scope.

This part establishes a consumer product safety standard for sling carriers.

§ 1228.2 Requirements for sling carriers.

(a) Except as provided in paragraph (b) of this section, each sling carrier must comply with all applicable provisions of ASTM F2907-15, Standard Consumer Safety Specification for Sling Carriers, approved on October 15, 2015. The Director of the Federal Register approves this incorporation by reference in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. You may obtain a copy from ASTM International, 100 Bar Harbor Drive, P.O. Box 0700, West Conshohocken, PA 19428; <http://www.astm.org/cpsc.htm>. You may inspect a copy at the Office of the Secretary, U.S. Consumer Product Safety Commission, Room 820, 4330 East West Highway, Bethesda, MD 20814, telephone 301-504-7923, or 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.

(b) In addition to complying with section 5.7.2 of ASTM F2907-15, comply with the following:

(1) 5.7.3 Warning labels that are attached to the fabric with seams shall remain in contact with the fabric around the entire perimeter of the label, when the sling is in all manufacturer recommended use positions.

(2) [Reserved]

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