



TOYTESTINGLAB

Independent Testing for Your Products

A DIVISION OF RI ANALYTICAL

**CPSIA & ASTM Requirements & Considerations
for Testing of Puzzles**

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CPSIA Requirements and Considerations for Testing of Puzzles

- CPSIA Lead in Surface Coatings (Typically analyzed by representative weighted composite!!)
- CPSIA Lead in Substrate
- CPSIA Phthalates (Surface coating materials)
- ASTM F963-08 Physical and Mechanical Testing
 - Toxicology -ASTM Soluble Heavy Metals
 - ASTM Flammability
 - Small Objects – If small parts are present then:
 - A product intended for children < 3 yrs fails!
 - A product intended for children between 3 and 6 years of age requires a Choking Hazard Warning in the proper format (ASTM F963-08 Section 5.11.2). This warning must be located on the principal display panel in accordance with Section 5.3.4 of ASTM F963-08. The minimum size of the warning is dependent on the size of the principal display panel.
 - A product intended for children ages 6 years and up is compliant but, it is highly recommended that the packaging still carry a choking hazard warning to warn consumers of safety concerns if the toy is accessible to younger children. Refer to ASTM F963-08 Section A1.5.



- Packaging Film:
 - Shrink over wraps that are destroyed when package is opened are exempt according to ASTM F963-08 Section 4.12.1.
 - Plastic bags with a minor dimension of 100mm (3.94in) must meet thickness requirements found in ASTM F963-08 Section 4.12. The average thickness of the bag must be >0.0015 in and the actual thickness must not be less than 0.00125 in. An alternative is to remove at least 1% of the area over any area 30 x 30 mm (1.18in x 1.18in) with perforations.

- Packaging:
 - ASTM F963-08 Section 7.1 states that the package must include the name and address of the producer or distributor.
 - The package must include any applicable warnings on the principle display panel in accordance with Section 5.3.4 of ASTM F963-08.
 - Toys or their packages must clearly display an age grade. If no age grade is presented, then the toy must be tested to the most stringent applicable requirements of ASTM F963-08 according to Section 5.2.
 - The Consumer Product Safety Act of 2008 Section 103(a) requires that products display permanent, distinguishing marks which would aid in identifying the location, date, batch, and lot information of a product for facilitating recalls involving children's products. "Permanent" refers to not being able to be removed by use and abuse testing performed in accordance with ASTM F963. The regulation also states that the label must be on the product and the packaging to the extent practicable. The tracking labels provision applies only to products manufactured after August 14, 2009.
- Supplemental Regulations which may be of concern (Typically applies to Mass Market Organization, i.e. Walmart, Target, Cracker Barrel, and Toy "R" Us)
 - 19 CFR 134 – Foreign Origin
 - Package should display Product Country of Origin and Ultimate Producer
 - Net Quantity Declaration
 - Certain retailers and mass merchant test protocols require specific net quantity labeling in accordance with the Uniform Packaging and Labeling Regulation (UPLR) and the Fair Packaging and Labeling Act (FPLA).

- Age Grade Considerations:
 - Children enjoy puzzles of various types and styles. Puzzle play can be a solitary or group activity. Puzzles are often seen as a solitary activity for young children, however children are also keen observers and interested in watching others finish puzzles. In general, puzzles are appropriate for children starting at 12 months of age. Children younger than this can only use pre-puzzles, which are intended for exploratory or practice play rather than fitting pieces together. Therefore, these are considered under *Early Exploratory/Practice Play: Mirrors, Mobiles, & Manipulative*.
 - Puzzles require three major skills: fine-motor skill to pick up and place the pieces, visual discrimination to identify if the pieces fit, and some cognitive skill to organize and plan the placing of pieces. As children develop, their fine-motor skills increase, visual discrimination improves, and cognitive abilities for trying different puzzle strategies improve. Children who have more experience with puzzles can try more complex puzzles at an earlier age than can children who have little experience.
 - Puzzles are important for the problem solving process because children learn new strategies for completing puzzles as they try new puzzles. Research indicates that working with puzzles and other closed-ended materials encourages persistence in children because they are expecting a solution for fitting the pieces together. One should place primary emphasis or importance on the following characteristics when determining the age appropriateness of puzzles:
 - Number of Parts
 - Licensing
 - Motor Skills Required
 - Size of Parts
 - Interlocking/Loose Parts
 - Age appropriateness based on number of puzzle pieces:
 - 12 – 18 months (Not applicable)
 - 19 through 23 months (Not more than 3 to 5 pieces)
 - 2 years (No more than 5-12 pieces)
 - 3 years (8-12 pieces)
 - 4 through 5 years (Age 4: 12-18 pieces; Age 5: Up to 35 pieces)
 - 6 through 8 years (Up to 100 pieces)
 - 9 through 12 years (Age 9: 100-500 pieces; Age 10: 500+ pieces)