

*** Consumer Federation of America * Kids In Danger ***

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Office of the Secretary
Consumer Product Safety Commission
4330 East West Highway, Room 820
Bethesda, MD 20814
Submitted via www.regulations.gov

Comments of Consumer Federation of America and Kids In Danger to the U.S. Consumer Product Safety Commission on the Notice of the Proposed Rulemaking, Safety Standard for Toys: Requirements for Water Beads (CPSC Docket No. CPSC-2024-0027)

Consumer Federation of America (CFA) and Kids in Danger (KID) submit the following comments in response to the U.S. Consumer Product Safety Commission's (CPSC or Commission) request for comments in the above-referenced matter.

Water Beads Present a Significant Hazard to Children

The CPSC data demonstrates that water beads present multiple serious risks, particularly for young children, due to the product's propensity to expand and cause obstructions in various body systems. Using two databases, CPSC identified the following incidents from 2017 to 2023.

- **Ingestion.** Of 64 incident reports, ingestion accounted for 52 cases, leading to one death and numerous hospitalizations. Water beads can expand after ingestions, potentially causing bowel obstructions. Symptoms are often misdiagnosed due to their ambiguity, often delaying critical treatment.
- **Ear insertion.** Five cases involved water beads lodged in the ear canal, requiring medical intervention. Removal can be complicated as exposure to water causes beads to expand, increasing the difficulty of extraction.
- **Nose insertion.** Four incidents involved children inserting water beads into their nose. This hazard can lead to severe tissue damage. Symptoms, such as congestion and bleeding, are often misattributed to other causes.
- **Aspiration.** Two cases of aspiration were noted, where water beads obstructed airways, leading to serious medical emergencies.
- **Choking.** One choking incident was recorded, highlighting that expanded water beads pose a significant risk due to the product's size and shape, potentially leading to life-threatening airway obstructions.

Additionally, based on NEISS data, the CPSC estimates that approximately 6,300 injuries related to water beads were treated in U.S. emergency departments from 2017

to 2022. Overall, ingestion (48%) and ear insertion (36%) were the primary injury patterns.

Request for Comments

a. Water Bead Definition

The proposed rule defines water beads as “various shaped, water absorbent polymers, such as, but not limited to polyacrylamides and polyacrylates, which expand when soaked in water.” While water beads are typically spherical or spheroid, we support the proposed definition because it ensures the rule will also apply to non-spherical water bead products, which may come in various shapes and forms. As for the portion that states “when soaked in water,” we strongly suggest that the CPSC instead stated “when soaked in water or other fluids” because water is not the exclusive fluid that can cause water beads to expand.

b. NPR Scope

Water Pellet Guns

The proposed rule would apply both to water bead toys and toys that contain water beads. We agree that the proposed rule should encompass any water bead toys or water beads marketed as a play object for children under 14 years of age, including toy water pellet guns designed to shoot water bead projectiles.

Water Bead Colors

The color of water beads should not factor into the determination of whether the product is a toy, and the CPSC should not limit its final rule to colored beads. While brightly colored water beads that resemble candy are a risk, water bead products that are not brightly colored can cause the same injuries and deaths and loose ones are more difficult to spot and remove from the child’s environment.

c. Proposed Requirements to Address Ingestion, Ear and Nose Insertion, and Aspiration Hazards

While the proposed requirements to address ingestion, insertion, and aspiration hazards - the 9.0 mm diameter funnel test gauge and 50 percent expansion limit - are a first step to mitigate the dangers of water beads, the 9.0 mm diameter funnel is not sufficient to address ingestion and aspiration hazards. The average diameter of a child’s airway varies but is smaller than an adult’s airway.¹ There is considerable variation in airway

¹ Iowa Head and Neck Protocols “Pediatric Airway - Cross sectional area”
<https://medicine.uiowa.edu/iowaprotocols/pediatric-airway-cross-sectional->

dimensions among children of the same age.² Further, there are known incidents involving children who have swallowed multiple water beads. The 9.0 mm diameter funnel will not adequately address ingestion and aspiration risk, and it does not adequately address the issue of multiple water beads aggregating and creating a greater obstruction. Given the known risks and data available about water beads, we strongly suggest that the CPSC use a 2.0 mm diameter funnel.

g. Water Beads Sticking Together

Multiple medical professionals have shared anecdotal evidence that water beads can and do stick together. This presents a serious risk for children, and we strongly support the CPSC researching further how and why water beads stick together or break apart.

h. Proposed Acrylamide Limit and Test Method

Water beads present a risk of acrylamide exposure to children. While our organizations support limiting acrylamide in water beads, we urge the CPSC to consider a lower limit. As the Agency for Toxic Substances and Disease Registry (ATSDR) describes in its toxicological profile of acrylamide, “children are not small adults. They differ from adults in their exposures and may differ in their susceptibility to hazardous chemicals.”³ Citing WHO reports, ATSDR stated, for example, that children’s exposure to acrylamide from food is 2-3 times that of an adult. Based on the concerns of children’s exposure and susceptibility, toys should not be a higher potential source of acrylamide exposure than food. Further, the known water bead injuries demonstrate that it is difficult to know when a child has ingested or inserted water beads, and water beads can remain in a child’s body for long periods without detection, thereby increasing the exposure to acrylamide while the child’s body is under stress from the inserted or ingested water beads. We urge the CPSC rule to ensure no acrylamide is in water beads or, alternatively, use ATSDR’s intermediate minimal risk level of .001 mg/kg.

Additionally, we strongly suggest that the CPSC continue to research water beads and determine if water beads that have broken apart present a higher risk of acrylamide toxicity.

i. Proposed warning Label Requirements for Water Beads

[area#:~:text=The%20average%20diameter%20of%20the,3%20mm%20to%202%20mm](#), accessed 6 December 2024.

² Dave MH, Kemper M, Schmidt AR, Both CP, Weiss M. Pediatric airway dimensions-A summary and presentation of existing data. *Paediatr Anaesth*. 2019 Aug;29(8):782-789. doi: 10.1111/pan.13665. Epub 2019 Jun 19. PMID: 31087466.

³ ATSDR. 2012. Toxicological Profile for Acrylamide. U.S. Dept. Health & Human Services, Agency for Toxic Substances and Disease Registry. Atlanta, GA.

Are the proposed warnings adequate to address hazards associated with water beads? Should other warnings be considered? Should other warning formats be considered?

While warning labels are the last resort for product safety, we support labeling using strong language to communicate that water beads have been associated with a child's death. In order to further communicate the risk of water beads and share critical information, we also suggest that the warning state that water beads may not appear on an X-ray.

Regarding the proposed warning for toys that contain water beads, will consumers know what "water beads" are when warned of the dangers of "water beads" that became dislodged from the toy? Is there another term aside from "water bead" that would help consumers better identify what part of the toy is a water bead?

Based on our organization's communications with parents and other caregivers, we believe that water beads is a recognizable term.

Regarding the proposed warning for toys that contain water beads, will consumers know what the warning "Discard if beads are coming out" means? Is there another term aside from "coming out" that would help consumers understand the warning?

"Discard if beads are coming out" may confuse consumers. We suggest that the CPSC instead say "discard if beads are or become accessible."

j. Effective Date

The injuries and death associated with water beads is shocking. We urge the CPSC to adopt the soonest implementation date to ensure no other tragedies befall American families. We also strongly suggest that the CPSC ensure adequate enforcement and prevent sell-off of non-compliant inventory.

Conclusion

Consumer Federation of America and Kids In Danger generally support the proposed rule but make suggestions to prevent more tragedy. We urge the CPSC to quickly adopt a final rule and robustly enforce its requirements. We appreciate the opportunity to provide feedback on this product, and we thank the CPSC for its effort to protect children.

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