



Insights into 2020 U.S. Toy Recalls

Understanding hazards may help you mitigate the risks

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General overview

Toy manufacturers are required to make sure the products they develop are safe for children. While most toys on the market conform to regulations, several toys are recalled each year due to specific safety concerns. In 2020, the U.S. Consumer Product Safety Commission (CPSC) recalled nine toys out of 256 total recalls (3.5%)*.

Out of the nine toy recalls:

- Three recalls were related to a chemical hazard due to **lead content**
- Two recalls were related to **small parts** detaching from the toy, causing a small part and/or choking hazard
- One recall was related to **sharp edges or points**
- One recall was related to **burn or fire**
- One recall was related to **magnets ingestion**
- One recall was related to **skull puncture, serious injuries**

UL can provide you with:

- An overview of the potential dangers involving toys, identifying common risk categories.
- An understanding of the safety details to pay attention to when designing products.
- Suggested testing packages to help minimize the potential risks associated with toys.

*Source: [CPSC.gov/Recalls](https://www.cpsc.gov/Recalls)

Please note that the information in this document is correct as of the date of publication. For more detailed information on specific products and suggested testing, please contact us.



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Common risks associated with toys in the U.S.

Click on the risks to learn more.



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Lead content

Why is lead content dangerous?

Exposure to high levels of lead may cause anemia, weakness, and kidney and brain damage. Very high lead exposure can cause death.

Specific risk

Lead is more harmful to children because their brains and nervous systems are still developing. Lead is toxic if ingested by young children and can cause adverse health effects that can be treated but not reversed.

Requirements

Section 101 of the U.S. Consumer Product Safety Improvement Act (CPSIA) has two requirements associated with lead in children's products.

First, no accessible part of a children's product may contain more than 100 parts per million (ppm) lead content. Second, paint or other surface coatings on children's products and furniture intended for consumer use may not contain lead in concentrations greater than 90 ppm.

Manufacturers of children's products must attest, based on third party testing, that their products comply with all relevant children's product safety rules. Thus, products subject to the lead content or paint/surface coating limits require passing test results from a CPSC-accepted third party laboratory for the manufacturer to issue a children's product certificate (CPC) before the products can be entered into commerce.



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LEAD CONTENT



In addition, the states of Illinois and California have additional regulations regarding lead.

The Illinois Lead Poisoning Prevention Act is a labeling law that includes children's jewelry, toys, childcare articles, etc., sold in Illinois. If the total lead content of an applicable component is more than 40 ppm but less than 600 ppm (or a lower federal requirement), the children's product requires a warning label.

California's Proposition 65 requires that California consumers receive a warning for products that contain chemicals known to the state of California to cause cancer and birth defects or other reproductive harm if those products expose consumers to such chemicals above certain threshold levels. Lead is included in this list.

Available testing package

Based on product characteristics, heavy metals testing could be required. Accessible component parts of children's products (as defined in ASTM F963-17 Sec 3.1.2 and in 16 CFR 1500.87, before and after use and abuse testing described in ASTM F963-17 Sec 8.5-8.10 and in 16 CFR 1500.50-53 and 16 CFR 1500.87) must not contain lead or lead compounds in which the lead content (calculated as lead metal [Pb]) is in excess of 100 ppm of the weight of the component, except as provided under 16 CFR 1500.88 and 16 CFR 1500.91.



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Small parts

Why are small parts dangerous?

Small parts of the toy pose a risk of choking by blocking the airway at the back of the child's mouth and upper throat. This kind of hazard is particularly significant for children under 36 months. The requirements of (U.S.) 16 Code of Federal Regulations (CFR) 1501 state, in part, "that no toy (including removable, liberated components, or fragments of toys) shall be small enough without being compressed to fit entirely within a cylinder of the specified dimensions."

In 2020, two toys in the U.S. were recalled for a choking hazard due to small parts. These small parts were due to pieces becoming easily detached from the product. Both products were intended for very young children (0 months+, 12 months+).

How to define small parts?

If the product (or separate part) fits completely into the small parts cylinder, it will be defined as a small part.

Small parts in toys are not suitable for children under 3 years of age.



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Exemption

Certain items like paper, fabric, elastics, yarn, strings, fuzz, crayons and chalk may be exempt per certain testing methods.

Warnings

Per ASTM F963-17, Sec 5.3 Safety Labeling Requirements, certain toys, and in some cases their packaging or their instructions, or both, are required to carry safety labeling to comply with this specification.

Sec 5.3.1 states that required safety labeling shall consist of an alert symbol (an exclamation mark within an equilateral triangle), a signal word (CAUTION or WARNING), and text that describes the hazard that is present. Additionally, safety labeling may contain text about what to do or not to do to avoid injury (for example, "Keep out of baby's reach"). Per ASTM F963-17, Sec 5.11.2, for toys and games intended for children at least 3 years old but less than 6 years of age, and which contain as-received small part(s), the labeling shall read:

⚠ WARNING:
CHOKING HAZARD—Small parts.
Not for children under 3 yrs.

According to ASTM F963-17, the manufacturer shall mark the warnings in a clearly visible, easily legible, understandable and accurate manner on the toy, on an affixed label or on the packaging and, if appropriate, on the instructions for use which accompany the toy.

Small toys that are sold without packaging shall have appropriate warnings affixed to them.

Available testing package

To evaluate the choking hazard related to small parts, please refer to ASTM F963-17 section 4.6 or 16 CFR 1501.



Sharp edges and points

Why are sharp edges and points dangerous?

Toys with sharp edges, points, or projections can cause lacerations, punctures, and abrasions.

Specific risk

In one 2020 recall, the toy broke creating sharp points that caused laceration hazards.

Requirements

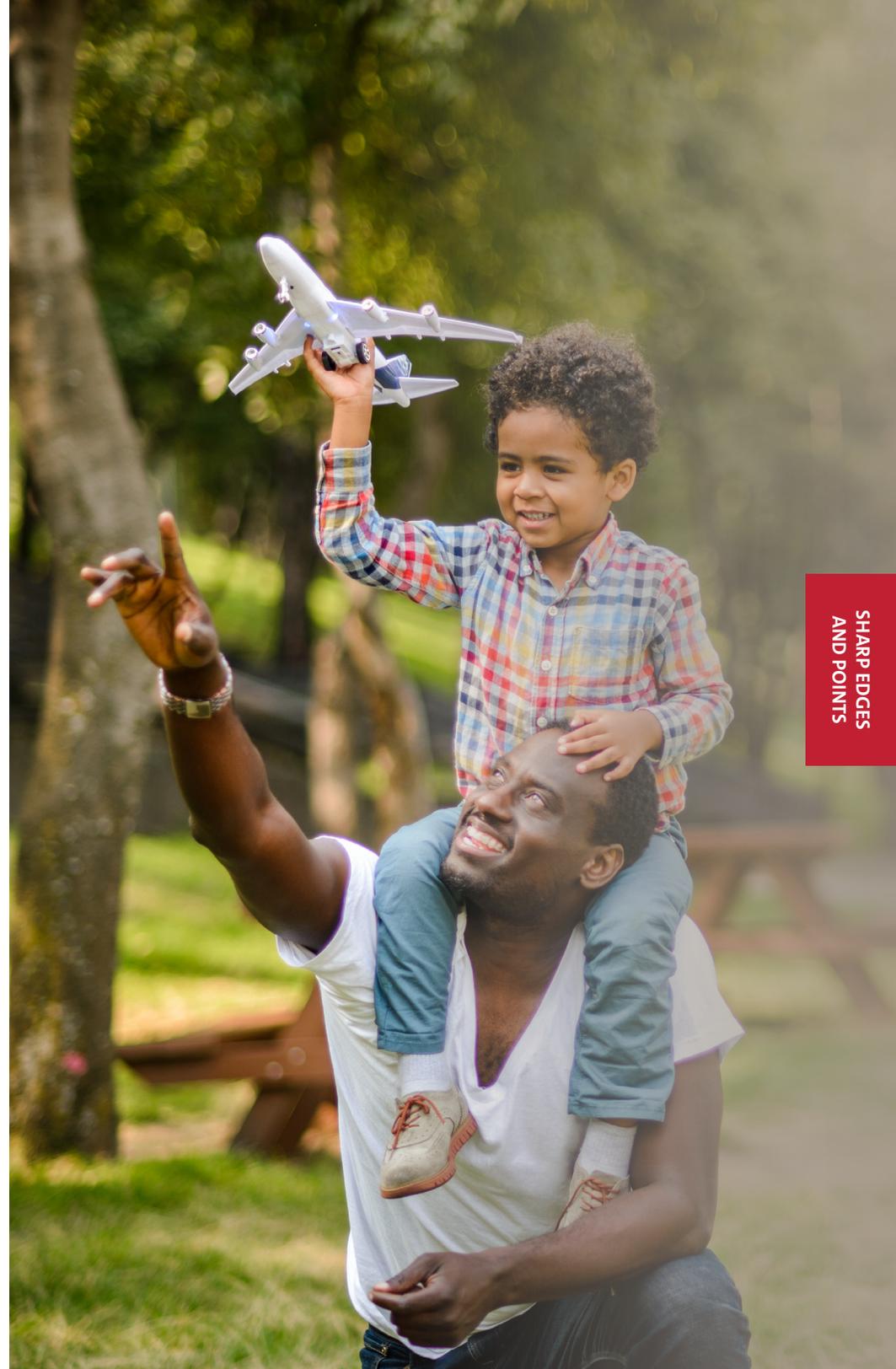
Per ASTM F963-17:

- Sec 4.7 - toys shall not have accessible, potentially hazardous sharp edges; and
- Sec 4.9 - toys shall not have accessible, potentially hazardous sharp points that may occur because of the following: configuration of the toy; assembly devices such as wires, pins, nails, and staples that are fastened poorly; poorly sheared sheet metal; burrs on screws; and splintered wood.

Potentially hazardous sharp points are defined by 16 CFR 1500.48.



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SHARP EDGES
AND POINTS



Toys intended for use by children under 8 years of age are subject to this requirement before or after use and abuse testing, or both, as specified in section 8.5 – 8.10. Toys intended for children less than 48 months old shall not have accessible hazardous functional points.

Exemption

Per ASTM F963-17, section 4.9.2, toys in which an accessible, potentially hazardous sharp point is a necessary function of the toy, such as a needle in a sewing kit, shall carry cautionary labeling as specified in 5.10, if the toy is intended for children from 48 to 96 months old.

Available testing package

Manufacturers should ensure that their toys can pass normal use and abuse testing so that sharp points aren't created from inferior materials or materials inappropriate for children. Please refer to ASTM F963-17:

- Normal use testing
- Abuse testing
- Impact tests
- Drop tests
- Torque, tension, compression and flexure testing



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SHARP EDGES
AND POINTS



Burn or fire (batteries overheating)

Why is overheating of batteries dangerous?

Batteries overheating can lead to a product becoming hot, melting or possibly igniting other materials nearby.

If a toy catches fire, the risk is high that children may be injured and burned.

Specific risk

The item involved in this recall is a toy flashlight intended for children.

Requirements

ASTM F963-17 Sec. 4.25 Battery-Operated Toys: these requirements are intended to address potential risks of injury associated with battery usage in toys (for example, battery overheating, leakage, explosion and fire, and choking on or swallowing batteries). Both non-rechargeable and rechargeable batteries are subject to these requirements.

Battery-operated toys shall conform to the requirements specified in this section after testing in accordance with the appropriate test methods described in 8.5 – 8.12.

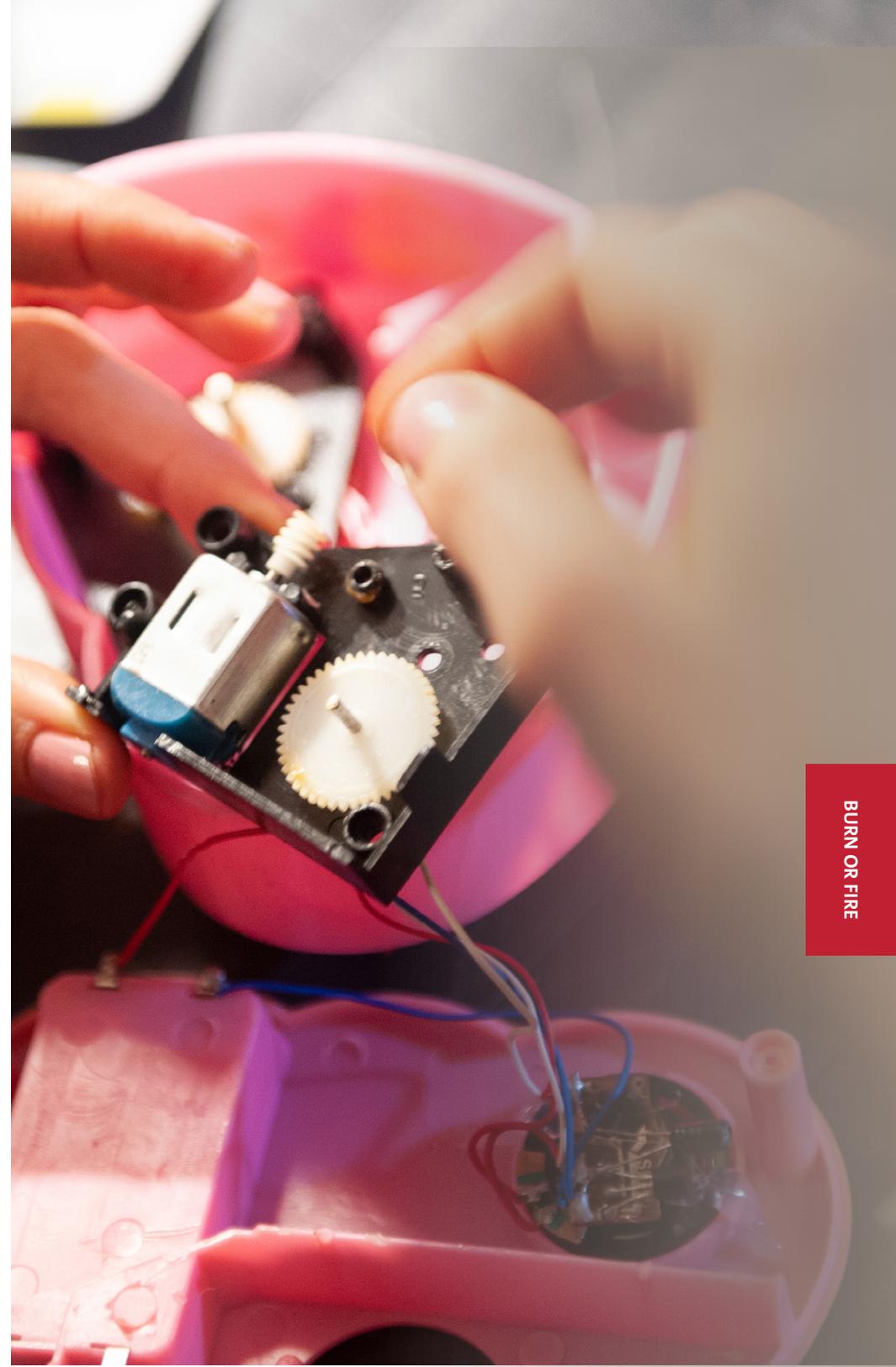
Suggested testing package

Per ASTM F963-17:

- Normal use testing
- Abuse testing
- Impact tests
- Drop tests
- Torque, tension, compression and flexure testing



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BURN OR FIRE



Multiple magnet ingestion

Why is multiple magnet ingestion dangerous?

When two or more high-powered magnets are swallowed, they can link together inside a child's intestines and clamp onto body tissues, causing intestinal obstructions, perforations, sepsis and death.

Internal injury from magnets can pose serious lifelong health effects.

Specific risk

The recalled magnet sets contain high-powered magnets and violate the federal standard for children's toys.

Requirements

ASTM F963-17 Sec 4.38: this requirement is intended to address ingestion hazards associated with toys intended for children up to 14 years of age that contain a hazardous magnet.

Toys shall not contain a loose as-received hazardous magnet or a loose as-received hazardous magnetic component.

Toys shall not liberate a hazardous magnet or a hazardous magnetic component after being tested in accordance with the Magnet Test Methods specified in ASTM F963-17 Sec 8.25.



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MAGNETS
INGESTION



Exemption

The ASTM requirement does not apply to magnets used in motors, relays, speakers, electrical components, and similar devices where the magnetic properties are not part of the play pattern of the toy.

Magnetic/electrical experimental sets intended for children 8 years of age and over that contain a loose as-received hazardous magnet or a loose as-received hazardous magnetic component, or both, are exempt from the requirements of ASTM F963-17 Sec 4.38.1 and 4.38.2 provided they comply with the requirements for safety labeling described in Sec 5.17

Suggested testing package

ASTM F963-17 Sec 8.25, and per ASTM F963-17:

- Normal use testing
- Abuse testing
- Impact tests
- Drop tests
- Torque, tension, compression and flexure testing





Skull puncture, serious injuries

Banned items - lawn darts

Why are lawn darts dangerous?

Effective on December 19, 1988, CPSC banned the sale of all lawn darts in the United States.

Pointed lawn darts, intended for use in an outdoor game, were responsible for the deaths of three children at that time.

Lawn darts are banned in the U.S. due to serious risks of skull punctures and other serious injuries, particularly to children.

Per the CPSC, between January 1978 to December 1986, lawn darts were responsible for an estimated 6,100 hospital emergency-room treated injuries. Approximately 81% of the victims were younger than 15 years of age, and 50% were younger than 10 years.

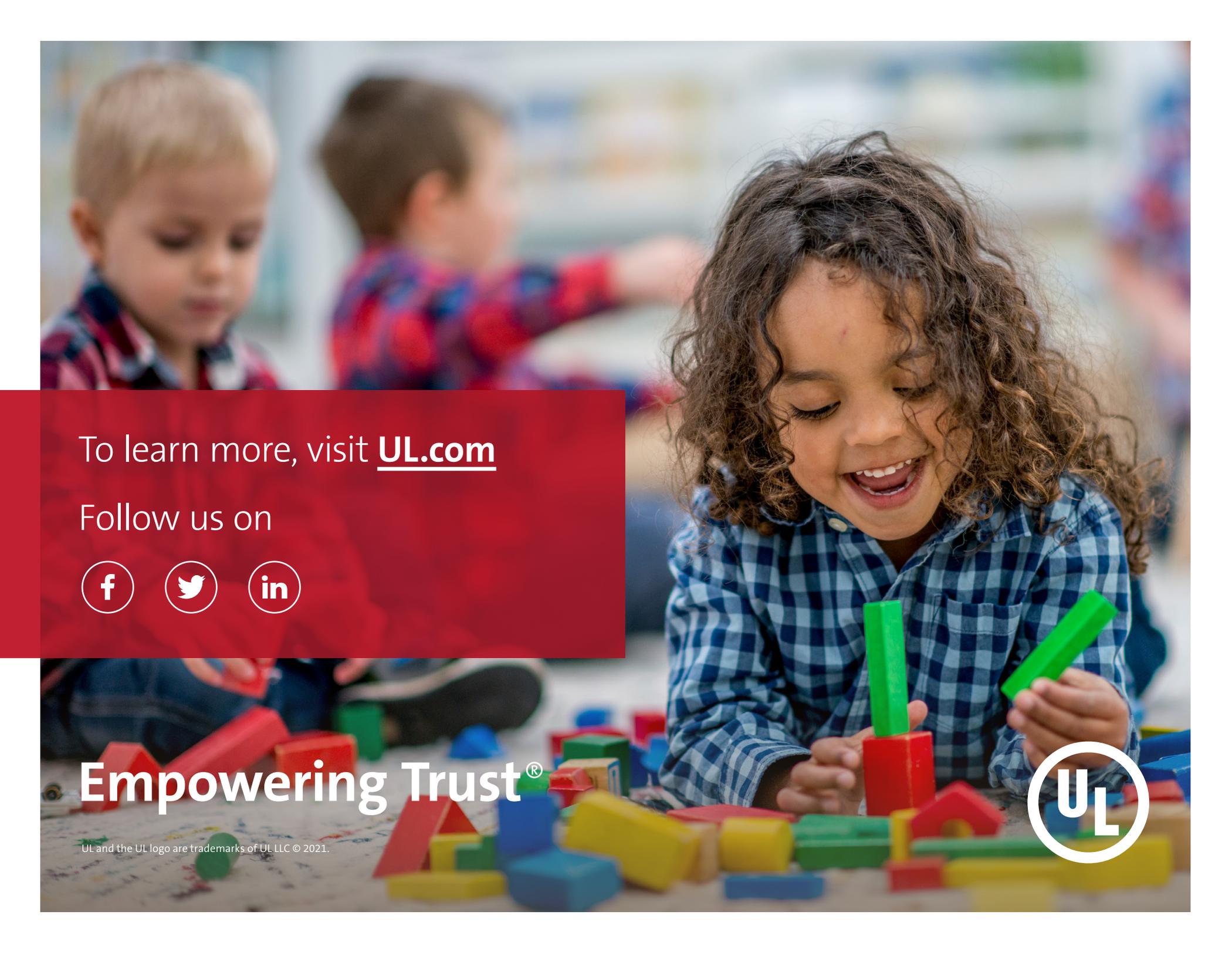
The CPSC also stated that lawn darts are not toys, but “dangerous projectiles”.

For more details, please visit: [CPSC Votes Lawn Dart Ban](#)



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A young child with curly hair is smiling and playing with colorful blocks. In the background, two other children are also playing with blocks. The scene is set in a brightly lit room, likely a classroom or play area.

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