



# CPSC Safety Alert

## The Dangers of Electric Toys

Electric toys and other electrically operated products intended for use by children can be extremely hazardous if improperly used, used without supervision, or not properly designed and/or constructed. The possible dangers are many: electric shock, burns, especially if the product has a heating element; and a wide variety of mechanical hazards common to toys in general, such as sharp edges and points and dangerous moving parts.

In 1973, the U.S. Consumer Product Safety Commission (CPSC) issued safety regulations under the Federal Hazardous Substances Act for electrically operated toys intended to be operated from 110-125 volt branch circuits. These safety regulations specify, manufacturing, construction and performance requirements intended to reduce the risk of injury from these products. In addition, the regulations call for mandatory cautionary labels on both the articles and their shelf packages. Also issued were complementary toy regulations for sharp points, edges, and small parts. In addition, there are applicable industry toy voluntary standards.

**While these standards and mandatory regulations have reduced the risk of injury from electric toys and other electric products for children, adults must still be selective in purchasing toys, supervise their use at home, inspect them periodically, and repair, replace, or discard deteriorating toys.**

### Selecting a Toy

Do not buy an electrical toy, or any toy, for a child too young to use it safely. Always check the age recommendation on the shelf package. Remember that this is a minimum age recommendation. If a toy is labeled "Not Recommended for Children under 8 Years of Age," this does not mean that every child who is 8 years old is mature enough to operate it. The buyer must still take into account an individual child's capabilities.

### Use of a Toy

Read the instructions accompanying the product carefully and then read them with any child who will be using the product and follow the manufacturer's recommendations. Be sure that the child knows how to use the items safely, understands all the instructions and warning labels, and is aware of the hazards of misusing the toy. The instructions should be kept with the toy or in a safe place

where they can be found easily.

### Supervision

Supervise the use of any electrical product. Just how much supervision is necessary is again a matter of judgment. Consider both the maturity of the child and the nature of the toy.

Be sure that the plug of an electrical product fits snugly into wall outlets or (if they must be used) extension cord receptacles. To prevent electrical shock, no prongs should be exposed. Teach children always to disconnect an electrical appliance after use by grasping the plug, not by pulling on the cord.

Keep infants and toddlers out of the area in which an electrical toy is being used.

**Storage.** All electrical toys should be put away immediately after use in a dry storage area out of the reach of younger children.



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**Maintenance and Disposal.** Deterioration of electrically operated toys can present many hazards. Therefore, check on their condition periodically. Be alert for broken parts, frayed cords, and damage to enclosures of wiring and other protected components. Only an adult or responsible older child should replace a light bulb on an electrical toy, as it is extremely important that the replacement bulb be of the proper wattage and that the plug is disconnected when the change is made.

Any product that has been so severely damaged that adequate repairs cannot be made should be discarded immediately.

## Regulations

The CPSC's regulations address the major electrical, mechanical and thermal hazards of electric toys and other electrically operated children's articles. All electric toys must meet these provisions to be sold in the U.S. If you find or have a toy you think does not meet these requirements, please call the CPSC at (800) 638-2772. Some of the most important provisions are listed below.

### Electrical

- All live electrical components must be securely enclosed. These enclosures must be designed so that they cannot be opened even with common household tools, such as a screwdriver or pliers. This does not apply, however, to the housings of replaceable light bulbs.
- Switches, motors, transformers, and the like must be securely mounted to prevent any non-functional movement and possible damage.
- Heating elements must be supported and prevented from making contacts that might produce shock hazards.
- Products designed for use with water must have electrical components in a sealed

chamber completely separate from the water reservoir (as in toy steam engines).

- Products requiring cleaning with a wet cloth must be designed to prevent seepage of water into areas with electrified parts, to prevent corrosion and electrical shock.
- Electrical plugs must have a finger/thumb grasping area and must have a safety shield to protect small fingers from accidentally contacting energized prongs while the toy is being plugged into a wall outlet.

### Mechanical.

- Enclosures must be strong and rigid enough to preserve the safety and integrity of the electrical components, even when the toy is subjected to foreseeable abuse.
- The toy's potentially hazardous moving parts must be enclosed or guarded to minimize the chance of contact.
- For pressurized enclosures such as steam chambers, there must be an automatic pressure-relief valve that will discharge in the safest possible direction.

### Thermal.

- Products must not exceed maximum surface temperature requirements. These temperatures are determined on the basis of accessibility of a particular surface, its function, and the material from which it is made. A surface to which a child cannot gain access, for instance, is allowed to reach a higher temperature than a knob or a carrying handle.
  - Containers for holding molten compounds and hot liquids must be designed and constructed to minimize spills. No container should melt or become deformed when heated.
- Toys must comply with the CPSC's toy safety requirements, which incorporate rigorous "use and abuse" test procedures for toys intended for various age groups.



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## Labeling

The labeling requirements specify that certain precautionary information shall be listed on labels on children's electrical products. The labeling is designed to help buyers choose the right toy for the right age and to warn the user of potential hazards.

The package of every such product must carry a cautionary message and a minimum age recommendation. No item with a heating element may be recommended for children under 8 years of age. There are some hobby items, such as wood burning kits, that reach very high temperatures and that have been exempted from certain maximum surface temperature regulations. These items cannot be recommended for, and should be kept out of reach of children under 12 years of age.

Certain areas of the product itself must also be labeled:

- accessible surfaces that exceed certain specified temperatures must carry a warning of the danger;
- toys with replaceable electric lights must carry a warning of the maximum safe wattage for a replacement bulb and a notice to disconnect the plug before changing the

bulb;

- products with non-replaceable lights will be so marked; and products not designed to be immersed in water must carry a notice to that effect.

## Instructions

All cautionary statements that appear on the toy or its package must also appear in the instructions that accompany it. These instructions must cover all aspects of safe use and maintenance and must advise parents of the necessity for examining the product periodically to be sure it is in safe working order.

These requirements help assure that electrically operated products for children will be as safe as can reasonably be expected.

## Reminder

When electric toys or other electrical products are in use, the CPSC recommends plugging them into GFCI-protected circuits. A GFCI (Ground Fault Circuit Interrupter) will prevent many electrocutions.

