Australian Toy Association

ATA Product Safety and Compliance

Products Powered by Button and Coin Batteries

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Agenda

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1. The hazard with Button and Coin Batteries
2. Regulatory Requirements for Safety
3. Regulatory Requirements for Information
4. Other Requirements to Consider
5. Suggestions for Specific Situations
6. Action Plan for compliance
7. Questions

Disclaimer
We are presenting information to the best of our knowledge and for the purposes of guidance.
We believe it to be correct, but the ATA will not take responsibility for any errors or omissions.
We are happy to work with members separately on specific issues that they may be having.

Introduction / Purpose

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- Primarily
  - To get a better understanding of the requirements for products powered by button and coin batteries
  - To consider the complexities of compliance with a combination of the Australian regulations, voluntary standards and international requirements
  - To understand the need to act now in order to be ready for the end of the regulation transition period
- For context
  - Understand the difference between button and coin batteries
  - Understand the different risks and requirements

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THE HAZARD

Coin Battery

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- Small round battery where the overall height is less than the diameter and having an electrochemical system that **contains lithium**
  (IEC 62115)

- CRddhh where dd is the diameter and hh is the height
  CR2032 is 20 mm in diameter and 3.2 mm high (or thick)

- Lithium chemistry => 3 V (actually a bit higher)

- Technical advantages in density of power and holding charge

Button Battery

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- Small round battery where the overall height is less than the diameter and having an electrochemical system that **does not contain lithium**
  (IEC 62115)

- Smaller diameter than coin, but higher
  (LR44 = 11.6 mm x 5.4 mm)

- 1.5 V

- Generic term that may be used to describe both types of battery

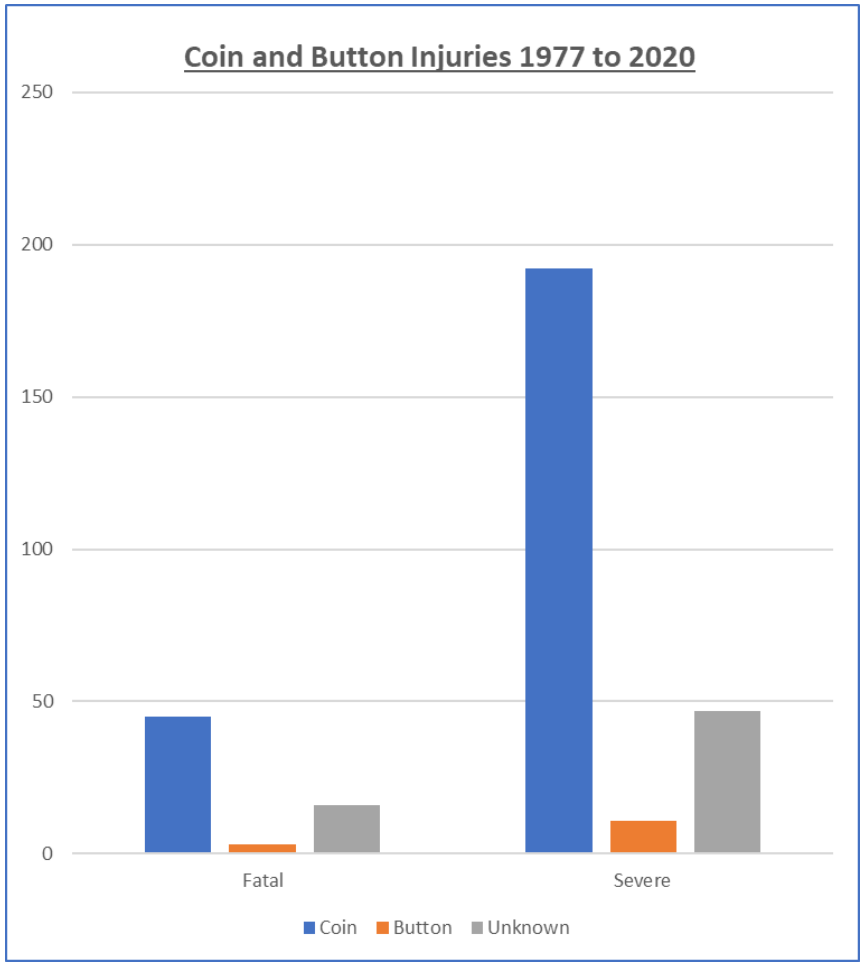
Mechanism of Injury

- In the presence of saliva, a current will flow
- A chemical reaction occurs that creates hydroxides
- Hydroxides dissolve tissue
- Critical injury may occur in as little as 2 hours in certain conditions that may lead to death

- Key conditions
  - Close proximity of anode and cathode
  - Voltage of 1.2 V or more
    Discharged coin batteries have more than this
  - Presence of saliva
    In the oesophagus but not in the stomach
  - Size of the battery
    To become lodged in the oesophagus

In Summary

- Coin batteries are significantly more hazardous than button batteries
  - Will cause injury whether discharged or not
  - More likely to become lodged
- Suppliers should be aware of the differences and act accordingly



Source: US National Capital Poison Center

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REGULATIONS

Regulatory Requirements

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- Introduced in December 2020.
- Transition period ends in June 2022
- For clarity
  - Products with button and coin batteries that are not secure are not safe and have not been tolerated for some time
  - From June 2022, the detail becomes much more important, and enforcement becomes easier
- Four regulations
  - Safety standard for batteries
  - Information standard for batteries
  - Safety standard for products that use batteries
  - Information standard for products that use batteries
- References
  - Regulations - Button and coin batteries | Product Safety Australia
  - Updated guidance (October 2021) - Button/coin battery safety - a guide for business on the application of mandatory standards | Product Safety Australia

Safety Standard for Products - General

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- Same requirements for both battery types
- Batteries must not be released during reasonably foreseeable use and misuse

  (Section 8)
- Batteries that are intended to be replaceable by the consumer must be secure such that they cannot be accessed by young children

  (Section 9)
- Options are provided for compliance with each section by complying with certain product-specific safety standards or by complying with the specified non-product-specific standard
- It seems sensible to follow the product-specific standards for the category of product that is being supplied

Safety Standard for Products - Toys

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- Reasonably Foreseeable Use and Misuse for Toys
  - Products must be tested

    Normally the test is due diligence – In this case it is required
  - Clause 5.24 (reasonably foreseeable abuse tests) of AS/NZS ISO 8124.1 (or the international equivalent) and the batteries are not released
- Battery Security for Toys
  - Test to clause 5.24 (reasonably foreseeable abuse tests) of AS/NZS ISO 8124.1 and then clauses 13.4.1 (constructional requirements for small batteries) of AS/NZS 62115
  - Also comply with 13.4.6 (battery compartment fasteners) if applicable

- Important to specify a test to the regulation – Don't rely on existing tests to the voluntary standards
  - The pass criteria is different
  - Clause 5.24 is not always required, e.g. if the product is for 8+
  - A product may conform with 8124.1 and still not comply with the regulation
  - A product may conform with EN 71-1 and still not comply with 8124.1

Safety Standard for Products – Other Products

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- Requirements for luminaires are closely aligned with toys
  - Both require that a tool is needed to open the battery compartment
  - Both require that screws or similar fasteners be secured to the cover

- Requirements for audio/video equipment and electronic apparatus are different
  - Two or more movements applied simultaneously are allowed
  - Screws don't need to be retained to the cover

- When the non-product-specific standards are used, screws must be retained to the cover

  (Section 10)

Safety Standard for Batteries

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- Applies to coin batteries and button batteries with diameters of 16 mm or greater

  No special requirements for most button batteries
- Specifies packaging so that affected batteries do not become accessible to children
- Applies to batteries sold separately and to batteries sold together with goods
  - Recommend not to provide batteries loose with product, i.e. they should be preinstalled if supplied.

Information Standard for Products

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- Specifies minimum requirements for warnings in instructions and on the packaging
- Options provided for goods without packaging and without instructions

  Assumed that instructions may be on the packaging (and so the warning required for instructions could be on the packaging in that situation)
- Different text for button and coin batteries
  - Coin Battery

    A statement to the effect that the battery can cause severe or fatal injuries in 2 hours or less if it is swallowed or placed inside any part of the body
  - Button Battery

    A statement to the effect that the battery can cause serious injuries if it is swallowed or placed inside any part of the body
- Provides additional recommendations for consideration

Information Standard for Batteries

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- Requires a ‘Keep out of reach of children’ symbol on coin batteries with a diameter of 20 mm or more
- Other requirements don’t affect batteries supplied installed in product

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SUGGESTIONS FOR SPECIFIC SITUATIONS

Other Considerations for Toys

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- Different approaches may be desirable depending on the destination for products (and the related requirements)
  - Australia only

    AS/NZS 62115 and AU Regulations
  - Australia and United States

    AS/NZS 62115, AU Regulations and ASTM F963
  - Australia and Europe (Multilingual)

    AS/NZS (EN) 62115, AU Regulations and EU translation requirements
  - Global

    AS/NZS (EN) 62115, AU Regulations, ASTM F963 and EU translation requirements

Packaging

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Type of Battery	AU Regulation	AS/NZS (EN) 62115	ASTM F963	Recommendation for Australia Only Product	Recommendation for Global Product
Button	Principal display Panel Internationally recognised safety alert symbol such as: 	No Requirement	No Requirement	Principal display Panel  Warning: Contains button battery. Hazardous if swallowed — see instructions.	Principal display Panel 
Coin	The triangle alone is allowed with appropriate text, e.g.  Warning: Contains button (or coin) battery. Hazardous if swallowed.	Anywhere on the packaging Warning: Contains coin battery. Hazardous if swallowed – see instructions. Or 	Principal display Panel  Warning: Contains button or coin cell battery. Hazardous if swallowed—see instructions. Graphical icons conveying the same information can be substituted.	Principal display Panel  Warning: Contains coin battery. Hazardous if swallowed — see instructions.	Principal display Panel 

Instructions – Button Batteries

Type of Battery	AU Regulation	AS/NZS (EN) 62115	ASTM F963	Recommendation for Australia Only Product	Recommendation for Global Product
Button	An alert word (such as DANGER, WARNING or CAUTION) with the letters of the alert word in upper case. An internationally recognised safety alert symbol. A statement to the effect that the battery is hazardous and is to be kept away from children (whether the battery is new or used). A statement to the effect that the battery can cause serious injuries if it is swallowed or placed inside any part of the body Advice to the effect that medical attention should be sought immediately if it is suspected the battery has been swallowed or placed inside any part of the body	Warning: Dispose of used batteries immediately. Keep new and used batteries away from children. If you think batteries might have been swallowed or placed inside any part of the body, seek immediate medical attention.	No Requirement	 WARNING: Contains button battery. A button battery can cause serious injuries if swallowed or placed inside any part of the body. Dispose of used batteries immediately. Keep new and used batteries away from children. If you think batteries might have been swallowed or placed inside any part of the body, seek immediate medical attention	 WARNING: Contains button battery. A button battery can cause serious injuries if swallowed or placed inside any part of the body. Dispose of used batteries immediately. Keep new and used batteries away from children. If you think batteries might have been swallowed or placed inside any part of the body, seek immediate medical attention

Instructions – Coin Batteries

Type of Battery	AU Regulation	AS/NZS (EN) 62115	ASTM F963	Recommendation for Australia Only Product	Recommendation for Global Product
Coin	An alert word (such as DANGER, WARNING or CAUTION) with the letters of the alert word in upper case. An internationally recognised safety alert symbol. A statement to the effect that the battery is hazardous and is to be kept away from children (whether the battery is new or used). A statement to the effect that the battery can cause severe or fatal injuries in 2 hours or less if it is swallowed or placed inside any part of the body Advice to the effect that medical attention should be sought immediately if it is suspected the battery has been swallowed or placed inside any part of the body	Warning: This product contains a coin battery. A coin battery can cause serious internal chemical burns if swallowed. Dispose of used batteries immediately. Keep new and used batteries away from children. If you think batteries might have been swallowed or placed inside any part of the body, seek immediate medical attention.	 WARNING: This product contains a Button or Coin Cell Battery. A swallowed Button or Coin Cell Battery can cause internal chemical burns in as little as two hours and lead to death. Dispose of used batteries immediately. Keep new and used batteries away from children. If you think batteries might have been swallowed or placed inside any part of the body, seek immediate medical attention.	 WARNING: Contains coin battery. A coin battery can cause internal chemical burns in as little as two hours and lead to death if swallowed or placed inside any part of the body. Dispose of used batteries immediately. Keep new and used batteries away from children. If you think batteries might have been swallowed or placed inside any part of the body, seek immediate medical attention	 WARNING: Contains coin battery. A coin battery can cause internal chemical burns in as little as two hours and lead to death if swallowed or placed inside any part of the body. Dispose of used batteries immediately. Keep new and used batteries away from children. If you think batteries might have been swallowed or placed inside any part of the body, seek immediate medical attention

If there are No Instructions

- The warning message required for instructions is still required
- May be on the packaging, e.g. Symbol on the front and full warning (with symbol) on the back
- May be a separate leaflet
- Note that instructions would be required to comply with 62115, but they may be on the packaging

If the Product is Not Packaged

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- The warning required for instructions is still required
- May be a label attached to the goods or a swing tag
- If there is an obvious front to the swing tag, then this should have the symbol
- A product would need to have instructions in order to comply with 62115

If the Battery is Not Intended to be Replaced

- If the product has instructions
  - It may be considered as having a lower risk profile (section 9)
  - The warning is still required in the instructions
  - Additional text is required to state that the batteries are not replaceable (AS/NZS 62115)
  - Should add text to advise not to try and access the battery
  - Should add text to advise what to do when the battery runs out
    Take it to a specialist for replacement
    Continue to use without electrical function
    Responsible disposal
  - The symbol is not required on the front of the pack
- If there are no instructions
  - The product doesn't have a lower risk profile
  - A symbol is still required on the front of pack
  - The warning information (plus additions) is required elsewhere

In Summary

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- You must test for compliance with the mandatory safety standard
- You can evaluate your compliance with the mandatory information standards internally, but labs may also do it.
- Each product should be evaluated separately for its own particular situation

  It is not realistic to identify a simple catch all label to cover everything and we don't recommend to try
- Knowing the different risk profiles for button, coin and other batteries, think about why you are using a particular battery and whether it would be more appropriate to use a different type.
- Consider the information recommendations for products that are just for Australia.

  E.g. adding the Australian Poisons Information Centre information
- Note that symbols are available from the ISO Online Browsing Platform - Online Browsing Platform (OBP) (iso.org)

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ACTIONS

The Issue

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- From June 2022 it will be a breach of the Regulations to sell a product that doesn't conform with the specified requirements
- There is no exception just because you've previously sold the same model

  However, 2nd hand goods may be sold, e.g. by a consumer

Buying

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- Should not be placing any orders for products that don’t conform

  It seems unlikely that they would sell through before June
- You should have a test showing conformity with the mandatory safety standard for each product ordered (in addition to conformity with the relevant voluntary standards)
- You should have a record of the evaluation and required labelling for the mandatory information standards for each product ordered
- Normal QA processes to ensure that you get what you ordered

Inventory

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- Every product with inventory anywhere in the supply chain (including at retail) should be evaluated for conformity and may require some action.
- Safely dispose of anything that is not safe

  E.g. the battery is easily accessible; the product doesn't comply with the voluntary standards
- Options for goods that could be considered to be safe, but don't conform with the mandatory standard

  E.g. the product conforms with the voluntary standard but is missing something in the mandatory standards
  - Take action to ensure that goods are sold through
  - Consider options to make the goods compliant

    E.g. adding the required symbol to the principal display panel, completing the required testing, etc
- Ensure that you have records of the testing and evaluation for compliant product

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QUESTIONS?