



National Retail  
Association

## CHILDREN'S APPAREL & ACCESSORIES PRODUCT SAFETY GUIDELINES

***SAFETY BY DESIGN | SAFETY IN USE | SAFETY ALWAYS***

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# Children’s Apparel & Accessories – Product Safety Guidelines

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## Preface

This industry guide is designed to assist manufacturers, importers, suppliers, retailers and regulators to understand, identify and mitigate critical safety *hazards* associated with children's apparel and accessories designed, marketed and intended for children from birth up to and including 14 years of age.

This industry guide was developed in consultation with key stakeholders including industry suppliers, retailers, regulators, testing laboratories and consumer associations.

Risk management principles have been adopted from a variety of existing industry standards and frameworks: A process referred to as a "*horizontal standards approach*". The risk assessment model addresses a variety of hazards in a modular approach based on product features to ensure products are designed and engineered to a safe standard.

When designing children's apparel and accessories, it is essential to take into consideration the behaviours of the children, whose need for exploration and challenge drives them to use products in new and different ways. One common factor children share is that they are unaware of the cause and effect and are therefore substantially less cautious than adults in relation to *hazards*. Products must therefore be safe for their intended use and foreseeable conditions of misuse.

Ultimate responsibility for product safety remains with the supplier<sup>1</sup>. Suppliers must ensure that products are not only safe-by-design, but that they are also manufactured to the same safe levels and standards as those samples reviewed and approved during the design and development stages.

## **Acknowledgments**

This document is a result of the collective input from various retail organisations and their representatives, under the broader banner of the National Retail Technical Standards Committee. Their efforts are recognised and appreciated.

## National Retail Technical Standards Committee

The National Retail Association's Technical Standards Committee is a group of quality assurance and product compliance specialists who come together from many of Australia's retail businesses to discuss the challenges of product safety and compliance.

The Committee is an important forum for the development of retail industry policy. It communicates regularly, on behalf of the industry, with government decision-makers and agencies, including Standards Australia, the ACCC, offices of Fair Trading and Consumer Affairs, the National Measurement Institute and others, conveying the issues and concerns of the retail sector.

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<sup>1</sup> Supplier in this context means: 1) The actual manufacturer for goods manufactured in Australia. 2) For goods imported into Australia, the organisation responsible for importing the products.

# Children's Apparel & Accessories – Product Safety Guidelines

## Objective

To provide industry guidelines that assist manufacturers, importers, suppliers, retailers and regulators to understand, identify and mitigate critical safety *hazards* associated with children's apparel and accessories designed, marketed and intended for children from birth up to and including 14 years of age.

## Scope

The requirements of this guide apply to Children's apparel and accessories designed, marketed and intended for children from birth up to and including 14 years of age. The guidelines provide a safety assessment framework that focusses on the known *hazards*, particularly relating to inhalation and ingestion, strangulation as well as other potential physical injuries.

Assessment of safety requirements applies initially to children's apparel and accessories during design and development phases, so items are safe-by-design. The assessment must not only consider hazards that occur during normal conditions of use, but also hazards arising from reasonably foreseeable conditions of misuse or abuse.

The requirements of this guide specify acceptable criteria and in some cases manufacturing "best practice" for children's apparel and accessories such as (but not limited to):

- Metal Trims, Buckles, Rivets & Snaps
- Draw Cords and ties
- Appliqué / Badges / Embroidery
- Pom, Poms, Tassels, Fringing, Braids & Plaits
- Sequins

Aspects of safety covered by existing legislation are not included within the scope of this guide:

1. Children's nightwear and limited daywear: Legislated requirements – performance and labelling
2. Apparel labelling: Legislated requirements – care instructions, fibre content and country of origin
3. Disguise costume: as these types of dress up's garment are captured in the scope of AS/NZS ISO 8421 Toy safety
4. Safety frameworks covering products not typically associated with apparel and accessories (e.g. FSANZ, APVMA, TGA, Cosmetics) unless they are referenced in some way within certain sections of the guide..

## Reference Standards

Standards referenced during the compilation and building of these guidelines includes:

- AS/NZS ISO 8124 Safety of Toys
- AS/NZS ISO 31000:2009 Risk management—Principles and guidelines
- HB 295.1 Product Safety Framework<sup>2</sup>
- BS 7907:2007 Code of practice for the design and manufacture of children's clothing to promote mechanical safety
- BS EN 14682:2007 Safety of children's clothing. Cords and drawstrings on children's clothing. Specifications.



<sup>2</sup> References and extracts produced with permission from SAI Global Ltd under Licence 1207-c121.

## Part 1: Risk Assessment

### Modelling

#### **Product Safety – Legal Framework**

The following provides readers with a short overview of the regulatory environment that governs the supply of products and services in the Australian marketplace. The framework is more intricate and involved than can be captured fully within this overview. Readers are encouraged to seek additional information as determined by their specific requirements and not to rely exclusively on the information provide below.

To assist, a number of important links to relevant websites are provided at the end of this section.

#### **Safety Framework Overview**

The Australian Consumer Law (“ACL”) commenced on 1 January 2011 and is a schedule in the Competition & Consumer Act 2010 (“CCA”). The ACL includes laws that relate to the safety of consumer products and product-related services<sup>3</sup>. Product safety relates to how the product performs in normal use and also extends to the conditions of any reasonably foreseeable use (which may include foreseeable misuse).

The ACL also includes a combination of specific safety requirements (mandatory safety and information standards) and a general expectation that all products offered for sale must be inherently and intrinsically safe.

Compliance with some product safety requirements can be established and confirmed through visual inspections (e.g. the presence of warning labels on baby bath aids), whereas some standards require specialist laboratory testing to verify compliance (e.g. measuring the presence of lead and cadmium in toys). Where laboratory testing is required to validate compliance, copies of test reports should be obtained from independent &/or accredited laboratories.

The Australian Competition and Consumer Commission or ACCC works closely with government in the development of mandatory safety and information standards. These standards are often developed by using existing Australian Standards, Industry Standards or parts thereof, to regulate that products must comply with performance, quality, information, marking &/or labelling obligations. It is illegal for businesses to sell products that do not comply with a mandatory safety or mandatory information standards.

The ACCC has a number of remedies and enforcement options available to deal with product safety related offences. These include <sup>4</sup> heavy fines (for corporations and individuals), the power to enforce product recalls and issue court enforceable undertakings.



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<sup>3</sup> Specific product groups (e.g. food, therapeutic goods) are covered by regulations from other government bodies. Please visit the Product Safety Australia Website for further information.

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<sup>4</sup> Not an exhaustive list of the options available to the ACCC.

## Product recalls, product bans and Mandatory Reporting

The product safety legislation also covers product bans, recalls and mandatory reporting of product/service related injuries to the ACCC.

- ☒ **Product bans:** products may be banned on a permanent basis by the ACCC or on an interim basis where the regulator<sup>5</sup> requires an opportunity to investigate further. It is illegal to sell products that are covered by either a permanent or interim ban.
- ☒ **Product Recalls:** where a product represents a significant safety risk for consumers or does not comply with a mandatory safety or information standard<sup>6</sup> and where the product has already been offered and sold to the public, wholesalers and manufacturers may need to withdraw products from sale and conduct a public recall.
- ☒ **Mandatory Reporting:** where a person has suffered death, illness or serious injury<sup>7</sup> whilst using a product (or service), upon becoming aware of the incident the supplier<sup>8</sup> must submit a report with the ACCC within 48 hours.

## Further information

The above provides a high level overview of the safety framework in Australia. For further details regarding the consumer laws, product safety and product recalls, it is recommended that you visit the following websites:

- Australian Consumer Law website: [www.consumer.gov.au/](http://www.consumer.gov.au/)
- Product Safety Australia website: [www.productsafety.gov.au/](http://www.productsafety.gov.au/)
- Product Safety Recalls Australia website: [www.recalls.gov.au/](http://www.recalls.gov.au/)
- New Zealand Commerce Commission: [www.comcom.govt.nz/](http://www.comcom.govt.nz/)



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<sup>5</sup> State or territory based regulators also have the ability to impose interim bans (applicable only in their state or territory) whilst safety investigations proceed.

<sup>6</sup> This is a risk based assessment. Products deemed unsafe need not be covered by existing safety standards. Under the ACL safety provisions, products must simply be “safe”.

<sup>7</sup> Typically, this is where the incident has required the injured party to receive medical &/or clinical attention.

<sup>8</sup> A supplier is defined as all participants in the supply chain and includes (but is not limited to) a retailer, dealer, distributor, importer and manufacturer.

## Risk Assessment: The Theory

The risk assessment process is intended to steer product developers, designers and manufacturers through a series of safety-gateways to ensure safety is engineered into new products at the earliest possible stage of a product's lifecycle. By identifying and substantially eliminating potential safety hazards during the design and sample/prototype approval procedures, the risks of safety incidents arising through poor design is appreciably minimised.

## Risk Assessment Methodology

Risk assessment modelling has been extensively captured through a variety of Australian and International standards.

The overall process of risk identification, risk analysis and risk evaluation is utilised to achieve a position of "tolerable risk", taking into consideration design, materials, components and construction. This is an iterative process requiring repeated application until a tolerable level of risk is achieved. (Figure 1 below)

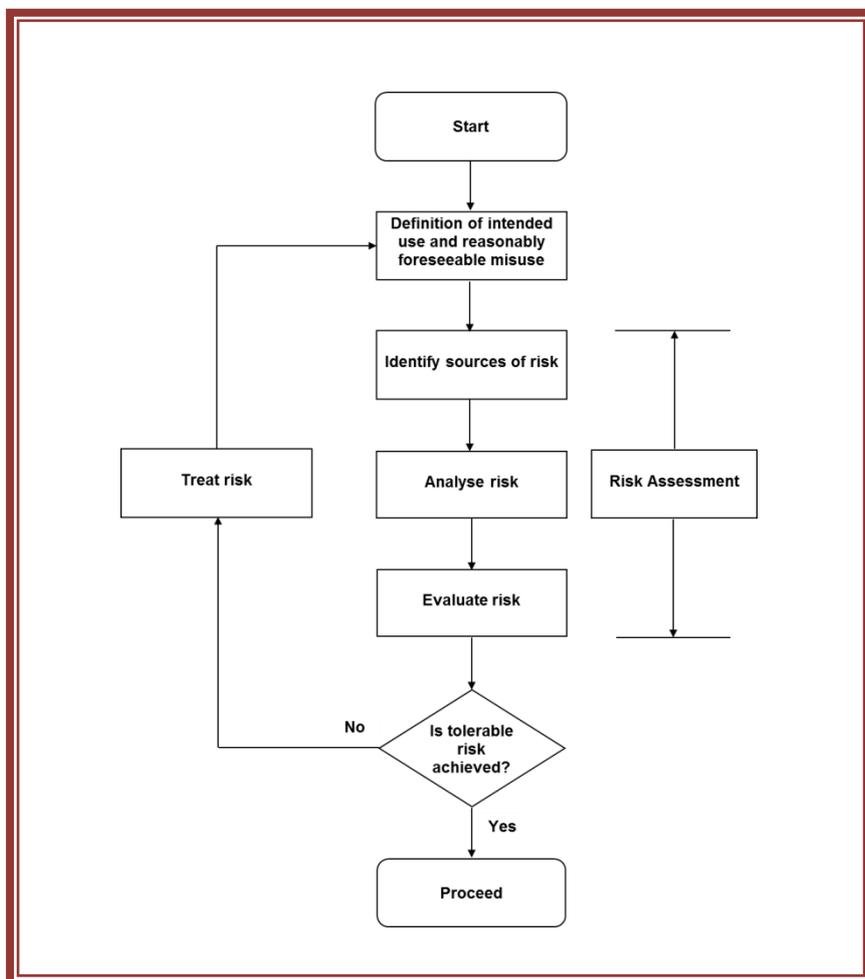


Figure 1 Risk methodology

## Risk Assessment Methodology cont.

Before commencing the risk assessment, the “conditions of use” need to be defined. This includes an understanding of the expected conditions of use as well as the reasonably foreseeable conditions of misuse. Special considerations relating to children and infants include:

- Their inability to understand the consequences of their actions
- Their lack of knowledge and experience.
- Their development and behaviour.
- Their likelihood of being injured as compared with adults.
- Their vulnerability compared with adults.

The risk assessment involves consideration for 3 key criteria before determining whether a “tolerable level of risk” has been achieved:

- Identify the risk - What can happen?
- Analyze the risk - How probable is it?
- Evaluate the risk - How severe could the resulting injury be?

If a position of tolerable risk has not been achieved, then the risks need to be treated (i.e. eliminated or reduced) before the risk assessment cycle starts again.

## Risk Assessment - Assessor Capabilities

The skills required to identify potential hazards are often acquired after many years of involvement with product development, in assessing and investigating problems, in implementing corrective action plans and in updating/creating product standards/specifications. For this reason, the safety- feature checklists have been created to assist those who have been less involved in assessments so they can identify hazards and conduct risk assessments to a high level of overall consistency and diligence.

For many organisations though, the concept of conducting detailed risk assessments may be daunting. Where an organisation feels that the skills required to conduct a thorough and accurate risk assessments do not exist within their organisation, it is recommended that the assistance of professional risk management services or product evaluation services are employed for these purposes.

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## Risk Assessment Model

The risk assessment modelling contained within these guidelines has drawn upon the principles of “consequence” and “likelihood” used within existing standards.

“**Consequence**” relates to the severity when an event causes injury or damage. For the purposes of these guidelines, “consequence” is categorised according to the following table.

Consequence (for an injury)	Injury Outcome & Treatment
Catastrophic	Permanent Disability or Death
Major	Extensive injuries requiring hospitalisation or substantial treatment by a registered physician
Moderate	Injuries requiring minor treatment by a registered physician but not requiring hospitalisation
Minor	First Aid Treatment
Insignificant	No Injuries. Mild discomfort or irritation

“**Likelihood**” relates to the chances or probability of an event occurring. “Likelihood” within the design and development processes relates to the expected or anticipated rate of failure. For the purposes of these guidelines, “Likelihood” is categorised according to the following table.

Likelihood Description	Expected frequency of fault/failure
Almost certain	All Garments/Products
Likely	1 per 10 Garments/Products
Possible	1 per 100 Garments/Products
Unlikely	1 per 1000 Garments/Products
Rare	1 per 10,000+ Garments/Products

The “**risk rating**” is then determined based on the combination of consequence and likelihood according to the following table.

Likelihood	Consequence				
	Catastrophic	Major	Moderate	Minor	Insignificant
Almost certain	High	High	Medium	Medium	Low
Likely	High	High	Medium	Medium	Low
Possible	High	High	Medium	Medium	Low
Unlikely	High	Medium	Medium	Low	Low
Rare	High	Medium	Medium	Low	Low

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The “**Recommended Actions**” are then determined based upon the risk rating. The higher the risk rating, the greater the effort required to alter the design and to re-engineer the product to minimise or eliminate the identified risk.

## Recommended Actions

<b>High Risk</b>	To mitigate the known/anticipated HIGH risks and to achieve a position of “tolerable risk”, actions should include: Eliminate/remove the identified hazard, Modify, re-design or re-engineer the product, Introduce cautionary labelling & warnings (if appropriate <sup>9</sup> ) Do not proceed with development of the product
<b>Medium Risk</b>	To mitigate the known/anticipated MEDIUM risks and to achieve a position of “tolerable risk”, actions should include: Eliminate/remove the identified hazard, Modify, re-design or re-engineer the product, Introduce cautionary labelling & warnings (if appropriate)
<b>Low Risk</b>	To mitigate the known/anticipated LOW risks and to achieve a position of “tolerable risk”, actions should include: Modify, re-design or re-engineer the product, Introduce cautionary labelling & warnings (if appropriate)

## Minimising production risks

The primary purpose of conducting risk assessments during a product’s design and development phases is to incorporate safety into the product from its origins. This is the single most effective strategy for eliminating product safety risks.

It should also be noted that, regardless of design, safety hazards may also arise within the production process. Risk may arise through:

- Contamination from equipment (e.g. broken needles)
- Self-contamination (e.g. buttons or press-studs loose in garments)
- Deviation from specification (e.g. trims not attached securely)
- Raw materials variability (e.g. fabric properties differ from approved fabric)

The use of production and post-production quality checks are required to ensure that quality and safety are not only engineered into products from the outset, but to ensure that safety transcends through the entire end-to-end process. Production and post-production quality checks may include the following<sup>10</sup>:

- Audits of factories to establish quality capabilities
- Quality inspections of manufactured goods to confirm items are as-approved
- Quality & safety checks of goods as they are being produced (i.e. in the production line)
- Laboratory testing to validate that production items meet specified requirements
- Production samples being submitted to the retailer/importer for approval prior to shipping

<sup>9</sup> Refer to section entitled “Cautionary Labels & Warnings” for guidance regarding appropriateness of labels/warnings.

<sup>10</sup> The scope of this document does not allow coverage of these stages in detail.

## Risk Assessment: The Practical Application

The following section explains the process steps through which the risk assessment model is applied during the product design and development stages.

### The Hazards

There are 4 main classes of hazards associated with children's apparel and accessories:

- ⚠ Choking & Ingestion hazards
- ⚠ Sharp Edges and Points hazards
- ⚠ Strangulation and Entrapment hazards
- ⚠ Chemical Toxicity hazards
- ⚠ Other Sources of Hazards

Detailed explanations of the hazards are provided in the "Hazards" section of this document.

### Product Features

A risk assessment template has been created for each of the features commonly associated with apparel and accessory products:

- Applique, Badges, Embroidery
- Beads & Jewel Trims
- Bows, Fabric Loops, Hanger Loops, Decorative and 3D Motifs
- Buttons
- Diamantes, Glued & Heat-sealed Decorations
- Drawstrings, Functional Ties, Decorative Ties & Sashes
- Gifts with Purchase (GWP)
- Metal Trims, Buckles, Rivets & Snaps
- Novelties
- Packaging
- Pom Poms, Tassels, Fringing, Braids & Plaits
- Sequins
- Zips - Slide Fasteners & Pullers

The detailed risk assessment templates are provided in the "Features" section of this document

## Cautionary Labels & Warnings

The appropriateness of cautionary labels and warnings needs to be considered in context of the hazards and the conditions under which the warnings will impact upon the user. By example, it is not appropriate to place small parts warnings for attachments on garments where garments themselves are intended for children younger than 36 months of age.

The following points should be considered to determine the adequacy and appropriateness of proposed warning labels and instructions.

- ? Is it reasonable to expect that by providing the warnings there will be an impact on the conditions of use and upon reducing safety risks? If not effective in reducing risk, then the use of warning labels may not be appropriate.
- ? Do warnings explain the danger/hazard for users? Do warnings explain the safe conditions of use? Both?
- ? Are warnings intended to provide cautions that influence the purchase decision? Are warnings prominent and visible at point of sale?
- ? Are warnings intended to provide advice and instructions regarding conditions of use? Should they be prominent and visible during use? Are they prominent and visible during use?
- ? Are warnings permanently attached to the product? If so, will the instructions remain legible and visible throughout the expected life of the product?
- ? Is the message written in a way that is easily understood? Are major callouts (e.g. CAUTION or WARNING<sup>11</sup>) stated in uppercase? Are graphics and images used to more clearly communicate the safety message?
- ? Do the safety warnings or instructions breach mandatory standards or could they be deemed misleading to customers?

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<sup>11</sup> "WARNING" indicates a hazardous situation which may result in death or serious injury. "CAUTION" indicates a hazardous situation that could result in minor or moderate injury. (ANSI Z535.5 Definitions)

## Documentation & Record Keeping

It is recommended that accurate records are retained in order to:

- **Demonstrate due diligence:** Shows that there is structure and a defined process.
- **Provide traceability:** An auditable trail is valuable to demonstrate due-process to either internal or external parties.
- **Capture “Corrective Action Plans” (CAP’s):** CAP’s are used as a reference to ensure required changes and improvements have been actioned.
- **Confirm Management Accountability:** The documents should be signed or authorised by an appropriately qualified and authorised company delegate.

Records should be readily accessible to support any investigations into alleged product failure or reported safety incidents. It is recommended that record retention times should:

1. Cover the period during which products are available for sale to customers, plus
2. Cover an additional period that represents the anticipated lifespan of the product in use.

## HAZARDS

Hazards are defined as the potential source of harm. For children's apparel and accessories, the most prevalent hazards have been identified. For each, an overview is provided for the nature of the hazard and how it presents dangers for children.

The key hazards are:

- Chemical Toxicity
- Choking & Ingestion
- Sharp Edges & Points
- Strangulation & Entrapment
- Other Sources of Hazards

## Chemical Toxicity

### Hazard Overview

Chemicals, toxins, impurities and contaminants are the hidden hazards in textile production, as these are invisible, often odourless and generally difficult to detect and understand. Research into the effects of certain chemicals and the determination of what levels should be considered hazardous is ongoing. There inconsistent regulations internationally regarding acceptable limits and whether negative consequences outweigh the utility of certain chemicals, especially in view of substitution with less studied substances. Therefore standards currently vary between regions. The more stringent regulations and bans are in place in Europe and North America.

Generally young children are more vulnerable to chemical hazards. Their bodies, internal organs and major physiological systems are still developing. Metabolic, immunological, hormonal and reproductive systems are immature and more vulnerable to toxins. Innate behaviour such as sucking and frequent hand to mouth contact means they ingest substances present in their immediate surroundings.

The following section aims to provide guidance on the common uses of chemicals in the supply chain. With awareness regarding substances having the potential to be harmful to humans or an adverse impact on the environment, avoiding them in the production of children's clothing should be easier.

The following classifications can be made:

- toxic substances that remain in textiles and can affect or transfer to the wearer
- substances that affect workers during production
- bio-accumulative substances with potentially long term effects on the environment

### The Regulatory Environment

In Australia: For consumer goods, there are few chemical restrictions or guidelines. Heavy metal restrictions are found within the mandatory standard for toys and as part of import regulations. The ACCC provides some guidance on the Product Safety Australia website: By example:

- Formaldehyde limits for clothing,
- Diethylhexyl phthalate (DEHP) in children's plastic products, and
- Azo dyes which reduce to aromatic amines.

Responsibility for the use of chemicals in Australia is overseen by the National Industrial Chemicals Notification and Assessment Scheme (NICNAS). The NICNAS mission is to aid in the protection of the Australian people and the environment by assessing the risks of industrial chemicals and providing information to promote their safe use.

The regulated environment in Europe and USA differs considerably from Australia.

In Europe, the **REACH** system (Registration, Evaluation, Authorisation and Restriction of Chemical substances) makes industry responsible for assessing and managing the risks posed by chemicals and providing appropriate safety information to their users. This is a more expansive and engaged framework than exists in Australia

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In the USA, there is a general requirement that children's products comply with testing and certification requirements as prescribed by their Consumer Product Safety Improvement Act.

## International Best Practices

Harmful substances throughout the supply chain can be avoided by putting a number of risk management tools in place, such as:

Assessing manufacturer compliance and accreditation before placing orders

Engaging suppliers to undertake steps to ensure conformance

Conducting regular product testing

The OEKO-TEX® Standard 100 is an independent testing and certification system for textile raw materials, intermediate and end products at all stages of production. Manufacturers that carry OEKO-TEX accreditation are committed to minimising risk through chemical hazards, by avoiding their use.

The Apparel and Footwear International RSL<sup>12</sup> Management (AFIRM) Working Group has developed a Supplier RSL Toolkit which is a collection of resources to help the global apparel/footwear supply chain understand and reduce the use and impact of harmful substances.

[www.afirm-group.com/supplierrsltool.htm](http://www.afirm-group.com/supplierrsltool.htm)

ZDHC (Zero Discharge of Hazardous Chemicals) group members made a shared commitment to help lead the industry towards zero discharge of hazardous chemicals by 2020. The group of brands ZDHC developed and published a Joint roadmap that go in detail specific projects and actions that can be taken along with other brands to the apparel and footwear industry to the goal of ZDHC.

[www.roadmaptozero.com](http://www.roadmaptozero.com)

## Harmful Chemicals List

The attached table is a compilation of information gathered from various international sources. The list represents the collective state-of-knowledge on health effects associated with chemicals. The list is intended for use during discussions with potential suppliers of products. The expectation being that suppliers provide commitments that:

- They are aware of these various requirements and
- The use of such chemicals should be avoided in production.

## Due Diligence Requirements

The science and research in the area of chemical hazards is very dynamic and complex. This document is intended to provide some guidance and insight into chemical safety. This document is not an exhaustive review of chemical hazards and is unlikely to capture the most recent developments and regulations.

For this reason, it is recommended that risk assessments include a review and understanding of the current regulations, industry best practice and any emerging issues associated with chemicals used for children's products.

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<sup>12</sup> RSL = Restricted Substances List

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## Harmful Chemicals List

Chemical	Potential Harm	Applications	Acceptable Limits
<b>ALKYL PHENYL ETHOXYLATES (APEO's)</b>	Classified as harmful to the environment.	Used in dyeing/finishing as detergents, wetting agents and emulsifying agents.	No specific regulation in Australia. Regulated Internationally.
<b>ALLERGENIC DISPERSE DYES</b>	Skin irritations. Potential carcinogen.	Dyeing of synthetic fibres (e.g. polyester, acetate, nylon) or "plastic" parts (e.g. buttons).	No specific regulation in Australia. Regulated Internationally.
<b>AROMATIC HYDROCARBONS (ORGANIC SOLVENTS)</b>	Highly toxic.	Used in some adhesives, print formulations, solvent scouring and spot cleaning.	No specific regulation in Australia. Not regulated Internationally.
<b>AZO DYES (ARYLAMINES)</b>	Potential carcinogen.	Used for dyeing & printing of textile & leather products.	No specific regulations in Australia but ACCC Product Safety guidelines are available. Regulated Internationally.
<b>CADMIUM</b>	Potential carcinogen.	Wide range of applications: <ul style="list-style-type: none"> <li>▪ Stabilisers in plastics (e.g PVC)</li> <li>▪ Coating of metallic accessories</li> <li>▪ Pigments used in dyes, prints, plastics.</li> </ul>	No specific regulation in Australia. Regulated Internationally.
<b>CHROMIUM &amp; CHROMIUM VI</b>	Skin irritant. Potential carcinogen.	Wide range of applications: <ul style="list-style-type: none"> <li>▪ Dyestuffs and finishing agents</li> <li>▪ Chrome plating,</li> <li>▪ Leather tanning, dyes and pigments.</li> </ul>	No specific regulation in Australia. Regulated Internationally.
<b>DIMETHYL FUMARATE (DMFu)</b>	Skin irritation. Respiratory difficulties.	A mould/moisture inhibitor used in silica sachets or in wood & fur products.	No specific regulation in Australia. Regulated Internationally.
<b>FLAME RETARDANTS</b>	Depends on exact chemistry. May be toxic and/or harmful to the environment	Flame inhibitors.	No specific regulation in Australia. Regulated Internationally.
<b>FORMALDEHYDE</b> Volatile gaseous compound.	Skin irritant. Mucous membrane irritant. Potential carcinogen.	Fixing and cross linking agent for dyeing, crease/wrinkle finishes and printing.  Products for tanning / softening leather.	No specific regulations in Australia, but ACCC Product Safety guidelines are available. Regulated Internationally.
<b>LEAD</b>	Bio-accumulative, non-reversible neurological	Accessories and accessories made of metals or alloys.	No specific regulation in Australia. Regulated Internationally.

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Chemical	Potential Harm	Applications	Acceptable Limits
	impacts.	Variety of pigments used in paints, prints, plastics.	
<b>MERCURY</b>	Bio-accumulative, non-reversible neurological impacts.	Used as a preservative.  Occurs as contaminant during certain processes.	No specific regulation in Australia. Regulated Internationally.
<b>NICKEL</b>	Skin irritations.	Shiny metals parts and accessories.	No specific regulation in Australia. Regulated Internationally.
<b>ORGANOTIN COMPOUNDS</b>	Depends on exact chemistry. May be toxic and/or harmful to the environment	Antifungal and antibacterial agent for textile and leather products.  Resins and polymers in prints, coatings, plastic parts.	No specific regulation in Australia. Regulated Internationally.
<b>PESTICIDES / INSECTICIDES</b>	Bio-accumulative	Used by growers and processors of cotton, cellulosic fabrics, wool and other keratin fabrics.	No specific regulation in Australia. Regulated Internationally.
<b>PH VALUE</b>	Skin irritation.	Most textiles & leather goods.	No specific regulation in Australia. Not regulated Internationally.
<b>PHENOLS: PENTACHLOROPHENOL (PCP)  TETRACHLOROPHENOL (TeCP)</b>	Potential carcinogens.	<b>ORGANIC SOLVENTS</b> Fungicides used for textile (cotton, viscose) and leather products.	No specific regulation in Australia. Regulated Internationally.
<b>PHthalATES</b>	Impact the development of reproductive systems.	Softening agent for PVC/plastics.  Plastisol prints & fabric coatings.	An ACCC permanent ban is in force for use of Diethylhexyl phthalate (DEHP) in children's plastic products. Regulated Internationally.
<b>POLYBROMINATED DIPHENYL ETHER (PBDEs)</b>	Potential bio-accumulative carcinogen.	Flame retardant for sleepwear, protective equipment.	No specific regulation in Australia. Regulated Internationally.
<b>SAND BLASTING</b>	Linked to a fatal lung disease (Silicosis).	Mostly denim processing.	Not regulated, but internationally accepted as banned practice.

## Choking & Ingestion

### Hazard Overview

One of the most prevalent and potentially dangerous hazards for young children is small parts or pieces that break-away or pull-away from garments or accessories. Once these small pieces become accessible to young children, they often find their way into children's mouths, upon which they present a choking or ingestion hazard<sup>13</sup>.

Detached small parts can arise through a number of circumstances:

- **“Normal” use:** Where attachments or parts of items create small parts through the conditions of use. By example: Bows at the neckline being plucked or sucked; Toggles on drawstring being sucked/chewed;
- **Washing treatments:** Garments and accessories are placed under physical duress whenever laundered. Any weaknesses in methods of attaching components can be exposed through the laundering process. By example: Diamantes glued to fabrics that become loose once washed.
- **Fitting or removing a garment:** Attachments such as buttons or snaps that are placed under stress whenever used, have the potential to separate and thereby create a small part.

Risks are greater for the very young. It is generally recognised that children under the age of three are most susceptible to severe outcomes from small part being swallowed. At young ages, the gag-reflex (i.e. the ability to cough to remove a blockage) has not adequately developed. If small parts are swallowed they can create a blockage that then becomes fatal.

Unfortunately, children are often reluctant to confess to their actions. This can make it difficult to establish the circumstances leading to them feeling unwell or having a reaction to something they have swallowed.



**The most effective means by which hazards can be eliminated is to prevent them from occurring in the first case.**

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<sup>13</sup> Such items may also be inserted into nose or ears. Whilst medical assistance may be required for removal, there is less likelihood of resulting injury or harm.

## Test Methods & References

### Laboratory Test Methods

AS/NZS ISO 8124.1 *Safety of Toys Part 1: Safety aspects related to mechanical and physical properties*. This toy standard provides test methods for the assessment of Small Parts (section 4.4).

The tests involve subjecting toys to “abuse tests” (i.e. drop, twist and pull tests). Parts that are liberated during the abuse tests are assessed whether they fit entirely into a truncated cylinder of very specific dimensions. Parts fitting entirely into the cylinder are defined as a “small part”.

The specific abuse tests involve the following:

- **Drop test** (clause 5.24.2): Based on the product's intended age group, products are dropped from a height onto a specified hard surface for a number of drop cycles.

Age group	Drop Height (cm)	No of cycles
Under 18 months	138 ± 5	10
Over 18 months, up to 96 months	93 ± 5	4

- **Torque (twist) test** (clause 5.24.5): The item is clamped, a specified torque/twist is applied. The test stops when the maximum torque ( $0.45 \pm 0.02$  Nm) is reached or when  $180^\circ$  rotation has been reached.
- **Tension Test** (clause 5.24.6): A clamp is applied. A pulling force of  $70 \pm 2$  N is applied evenly over a period of 5 s and held for 10 s. The part being tested is pulled upwards & sideways.

### Physical Assessment

It is not practical to subject every garment, accessory, trim and attachment to a laboratory for independent testing. It is recommended therefore that in the first instance, designers, developer & technicians apply internal assessments. Such assessment should replicate, to a large extent, the abuse tests that would be conducted by laboratories (i.e. drop, pull & twist pieces to see whether parts remain attached). Should any pieces become dislodged, assess whether they fit into the standard truncated cylinder<sup>14</sup>.

As performance can be affected by laundering, consideration should be given to conducting this assessment on both an unwashed and a washed sample.

If the internal assessment identifies a potential small part risk or if there is an element of doubt, then:

- submit a sample for independent laboratory testing, or
- remove, re-design or re-engineer this aspect of the product

<sup>14</sup> Note: Truncated cylinders are available from international laboratories at negligible cost.

## Other Considerations

### “Conditions of Use” Considerations

The location of trims or embellishments on garments can influence the risk assessment. If the potential small part is placed so it can easily find its way into the mouth (e.g. on a sleeve end or on a collar tip) then it is more likely to be mouthed or sucked by a child. The same components attached at lower risk zones where they cannot be easily mouthed (e.g. back of a garment, waist of pants) will logically be less risky.

### Post-Production Evaluation



It is necessary to verify that the quality and safety standards approved during the pre-production assessment of prototype samples are fully replicated and transferred into production.

Choking & ingestion hazards can be introduced through variations during the production/manufacturing process (e.g. through materials variation, assembly variances, etc.) that could not have been detected during assessment of prototype samples.

The following is recommended:

- Upon completion of production, the finished goods should be subjected to a final inspection. The inspection should be conducted by independent inspectors (i.e. not the factory's QC Team) and be conducted according to a recognised statistical sample plan. The inspection should apply the “tactile assessment” standards to confirm that the performance of bulk goods does not deviate from the approved sample.

## Sharp Edges & Points

### **Hazard Overview**

Safety risks arise for children when buttons, trims and attachments create sharp edges or sharp points. These create potential:

- Penetration risks
- Piercing risks, or
- Slicing risks

These risks can present themselves during:

- Regular use (e.g. a sharp corner edge on a buckle that causes a slicing risk when arms pass across the edge)
- Fitting or removing a garment (e.g. a star-shaped button on a front placket that creates a sharp point risk when removing the garment over the head)

Risks are greater for the very young who are unable to communicate their discomfort or take action to remove/eliminate the risk (e.g. consider a zipper on a grow suit with sharp teeth that cause scratching and abrasions around the neckline, compared to the same zip issue for an older child's track top).

Sharp points and edges should be identified through a risk assessment during the product development and approval stages, then eliminated through re-design, re-engineering or re-processing. Sharp edges and points can also arise via contamination during the production process (e.g. Broken needles, pins or staples). It is important that post-production quality controls are implemented to identify and rectify any risks introduced through the production process.

Sharp edges and sharp points are often associated with the following:

- Badges, brooches or decorative pins.
- Beads, diamantes, sequins,
- Buttons, studs, rivets
- Zips, zip teeth, zip pullers
- Contamination: Often metallic (e.g. broken needles, pins) but could also be non-metallic (e.g. nylon Kimble residues)

NB: Either the item itself or the way it is attached may create the sharp edge or sharp point (e.g. a metallic badge that is attached by a safety-pin mechanism)

## Test Methods & References

### Laboratory Test Methods

AS/NZS ISO 8124.1 Safety of Toys Part 1: Safety aspects related to mechanical and physical properties. This toy standard provides test method for the assessment of sharp edges (section 5.8) and for sharp points (section 5.9).

Attachments that are abrasive, sharp-to-touch or likely to be uncomfortable for young children would not necessarily be identified as “sharp” if relying on testing according to the toy standard. It is therefore recommended that a tactile assessment be conducted to identify sharp edges and points rather than relying on more formal laboratory testing<sup>15</sup>.

### Physical (Tactile) Assessment

Existing laboratory test methods do not provide a practical method by which sharp edges and points can be identified. A more practical “tactile” risk assessment is required. The risk assessment involves running hands and fingers across all surfaces for which a potential sharp edge or point could arise.

Wherever the tactile assessment identifies **moderate-to-significant** sharp, rough or abrasive surfaces, then this should be deemed a point of failure. The product should be rejected with the identified risk then being eliminated through re-design, re-engineering or re-processing – For all age groups.

Where the tactile assessment identifies a **low level** of sharp, rough or abrasive surfaces, then this should be deemed a point of failure for products suitable for “Ages up to 3 years”. The product should be rejected with the identified risk then being eliminated through re-design, re-engineering or re-processing. For all other age groups, re-design, re-engineering or re-processing should be considered.

Where there are **Nil** sharp, rough or abrasive surfaces, the product should be approved.

## Other Considerations

### “Conditions of Use” Considerations

In addition to the tactile assessment, consideration should be given to the “Conditions of Use”. An attachment may be considered low-to-moderate risk from a sharp edge or sharp point perspective, but then be positioned on a garment in such a way that it increases the likelihood of the sharp edge or point causing an injury. (e.g. A tooth-shaped toggle/button at the neckline of a hooded jacket. Whilst the toggle may not be overly “sharp”, because it passes across the face and eyes when removed overhead, this creates a higher risk through conditions of use.)

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<sup>15</sup> After checking with international laboratories, no other relevant standards or test methods could be identified

## Post-Production Evaluation



It is necessary to verify that the quality and safety standards approved during the pre-production assessment of prototype samples are fully replicated and transferred into production.

In particular, for sharp edges and sharp points, risks may be introduced through the production process that would not have been present during assessment of prototype samples (eg. Broken needles).

The following is recommended:

- 1) Upon completion of production, the finished goods should be subjected to a final inspection. The inspection should be conducted by independent inspectors (i.e. not the factory's QC Team) and be conducted according to a recognised statistical sample plan.
- 2) For medium-high risk categories, finished goods should also be passed through a metal detector to ensure that any broken needle points or other metallic foreign matter such as pins or staples are identified, isolated and the contamination removed.
- 3) A broken needle control system requires sewing machine operators to submit all pieces of broken needles to a supervisor before a replacement needle is provided. Such a process should form part of a factory's standard control mechanisms, regardless of whether the factory uses metal detection devices.

## Strangulation & Entrapment

### **Hazard Overview**

Strangulation and entrapment hazards arise through the use of cords, bows or ties used functionally or as decoration on garments. Long ties and cords have the potential to either wrap around necks or, for ties used in hoods (for example), to tighten around necks and cause strangulation.

Globally, there are reports of very serious injuries and deaths occurring when knots, toggles or cord-ends become snagged or caught into moving parts or closing doors. Ties and cords with bulky cord-ends are particularly susceptible to being entrapped, especially when their length and positioning on garments allows them to hang, drape or swing away from the body.

To address the variety of hazards that arise from the use of cords and ties, consideration should be given to the following:

- Eliminating functional ties & cords, especially for the younger age groups
- Limiting the length of both functional and non-functional ties and cords
- Securing functional ties so they are unable to be removed. As an example: Bar tack the draw cord at the centre back of a hood so it will not slide out through the channel.
- Remove all knots, toggles, aglets etc. from the ends of draw cords to minimise potential entrapment hazards (NB: Also removes potential choking and ingestion hazards)
- Cords and ties around the neckline are high risk zones for strangulation hazards. Long ties and cords at the extremities (wrists, ankles) or on waistbands of jackets are high risk zones for entrapment hazards.



**The most effective means by which hazards can be eliminated is to restrict the design & use of cords and ties: Especially in higher risk zones and for younger age groups.**

## Test Methods & References

### Laboratory Test Methods

There are no specific laboratory test methods to assess or measure strangulation and entrapment hazards.

Note: For cords or ties that contain an end-cap or toggle, refer to “Ingestion & Choking Hazards” for relevant test methods.

### Physical Assessment

The risks introduced through the use of draw cords and ties are most appropriately identified through a physical assessment. The physical assessment will involve:

- Measuring lengths of cords/ties in the relaxed state and, for functional ties, in tightened state.
- Ensuring that drawcords are secured by stitching at the centre back of garments to prevent them from being removed and becoming a hazard: Especially for young children's products and for hoods (for all ages).
- Non-functional (decorative) treatments are used wherever possible: Especially for products intended for very young children.
- Cords and ties do not use end-treatments that create potential entrapment hazards: Especially for cords and ties that have the potential to swing or drape away from the body.

## OTHER CONSIDERATIONS

### “Conditions of Use” Considerations

The location and design of cords and ties on garments can influence the risk assessment. High risk zones for strangulation are cords and ties around/near the neckline. High risk zones for entrapment are around the waists or limb extremities (ankles, wrists), especially if cords and ties can drape or swing away from the body.

### Post-Production Evaluation



It is necessary to verify that the quality and safety standards approved during the pre-production assessment of prototype samples are fully replicated and transferred into production.

Strangulation and entrapment hazards can be introduced through variations during the production/manufacturing process (e.g. through materials variation, assembly variances, etc.) that could not have been detected during assessment of prototype samples.

The following is recommended:

- Upon completion of production, the finished goods should be subjected to a final inspection. The inspection should be conducted by independent inspectors (i.e. not the factory's QC Team) and be conducted according to a recognised statistical sample plan. The inspection should apply the “physical assessment” standards to confirm that the performance of bulk goods does not deviate from the approved sample.

## Other Sources of Hazards

### Hazard Overview

The hazards identified as being the most significant and relevant for children's apparel and accessories have been covered in detail in other sections. It is worth noting however that there are numerous other hazards which do not present risks generally for children's apparel or accessories. These hazards are listed below as an additional source of reference for risk-assessments.

**Burn hazards:** Hazards with the potential to cause injury by heat, friction, chemicals or solar radiation. Flammability hazards for children's nightwear are covered by a mandatory standard (AS/NZS 1249). Sun protective fabrics can be tested and assessed according to the standard AS/NZS 4399.

**Eye impact hazards:** Hazards arising from projectiles (e.g. objects shot or fired, usually from a toy). The toy standard (AS/NZS ISO 8124.1) contains test requirements for projectiles.

**Insertion hazards:** Hazards arising from children placing small objects into body openings (e.g. ears, nose, but not the mouth). Small parts create the risk, similar to choking and ingestion hazards. The toy standard (AS/NZS ISO 8124.1) provides methods to assess small parts.

**Pinching hazards:** Hazards arising from closing mechanisms that can pinch or squeeze the skin. (e.g. Alligator clips on suspenders, overalls or hair accessories)

**Projection hazards:** Hazards arising from pieces or components of garments/products which protrude in a way that could cause them to push-into or penetrate the body. (e.g. long or elongated buttons or toggles)

**Tripping hazards:** Hazards arising from parts of garments that can float/sit on or near the feet (e.g. long belts on robes, draw-cords at/near ankles on pants)

Other hazards which are even less likely to be associated with children's apparel and accessory products (such as electrical hazards, sound/noise hazards) are not covered by this document.



**The most effective means by which hazards can be identified and eliminated is to conduct comprehensive risk assessments at the design and development stage.**

## Test Methods & References

### Laboratory Test Methods

Where available, test methods are named within the above definitions.

#### Physical Assessment

The most effective method of identifying these types of potential hazards is to conduct a physical examination. The assessment should aim to identify all potential sources of hazard of the types outlined above. As there are few test methods to assist with making approval decisions, it is suggested that potential hazards are assessed by a qualified risk-assessment practitioner. In the absence of such a practitioner, it is recommended that the risk be assessed by a panel or within a group to ensure there is agreement (i.e. agreement on the level of “tolerable risk”). The review process and outcomes should be documented.

### Other Considerations

#### Post-Production Evaluation



It is necessary to verify that the quality and safety standards approved during the pre-production assessment of prototype samples are fully replicated and transferred into production.

A variety of hazards can be introduced through variations during the production/manufacturing process (e.g. through materials variation, assembly variances, etc.) that could not have been detected during assessment of prototype samples.

The following is recommended:

- Upon completion of production, the finished goods should be subjected to a final inspection. The inspection should be conducted by independent inspectors (i.e. not the factory's QC Team) and be conducted according to a recognised statistical sample plan. The inspection should apply the “physical assessment” standards to confirm that the performance of bulk goods does not deviate from the approved sample.

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## **Part 2: RISK ASSESSMENT WORKSHEETS**

Risk Assessment worksheets are provided for the most common garment / accessory trims and treatments that have the potential to cause harm. The worksheets are the practical tools and guides to be used during the risk assessment. For each trim / treatment, guidance is provided for the design of safe products. Where such trims / treatments are then used in garments, methods for identifying risks and testing performance is outlined.

Risk assessment worksheets are provided for the following trims and treatments:

- 2.1 Applique, Badges, Embroidery
- 2.2 Beads & Jewel Trims
- 2.3 Bows, Fabric Loops, Hanger Loops, Decorative 3D Motives
- 2.4 Buttons
- 2.5 Diamantes, Glued & Heat-sealed Decorations
- 2.6 Drawcords, Functional Ties, Decorative Ties & Sashes
- 2.7 Gifts with Purchase (GWP)
- 2.8 Metal Trims, Buckles, Rivets & Snaps
- 2.9 Novelties
- 2.10 Packaging
- 2.11 Pom, Poms, Tassels, Fringing, Braids & Plaits
- 2.12 Sequins
- 2.13 Zips – Slide Fasteners & Pullers

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## Children's Apparel & Accessories – Part 2: Risk Assessment Worksheets

### 2.1: Applique, Badges, Embroidery

**GUIDELINES FOR USE:** Use this worksheet to facilitate a risk assessment for products containing buttons:

1. Consider the recommendations contained within the “Design Considerations” text box.
2. Assess each of the potential hazards by first understanding the “Functional Requirements”, then conducting the “Preliminary Assessment” (as required).
3. Proceed to “Further Testing” where the “Preliminary Assessment” is inconclusive or to obtain independent safety and performance evaluations

#### SCOPE:

This section provides recommendations for the design and manufacture of children's clothing in relation to the use of Applique/badges and embroidery to promote safety and minimise risks.

Applique/badges and embroidery, though commonly used on all forms of apparel, have the potential to create safety hazards: Especially for small children.

Applique/badges and embroidery that are poorly attached to garments where they can become detached or where long threads are easily accessible, pose a safety risk to young children.

Sharp or pointy edges that can scratch or pierce a child's skin can arise through poor quality appliques or badges and/or inferior finishing techniques.

Coatings and materials of appliques/badges, ingredients used within liquid fillings of badges, should not contain chemicals with known health impacts.

#### DESIGN CONSIDERATIONS:

The following is recommended:

- Applique/badges and embroidery should remain attached under the allocated care instruction, and throughout the life of the product
- Applique/badges and embroidery stitching is to be neat and securely sewn. Stitch type, density and tension should be controlled to ensure complete enclosure and to avoid potential finger probing, detachment and loop forming. There should be adequate knotting off to avoid any unravelling.
- Long loops and threads on internal or external areas of product should be trimmed off.
- The reverse side of an embroidery/applique/badge stitching area should be nonabrasive: Especially if likely to be in direct contact with the skin. A suitable backing/fusing material may be required to provide a layer of protection.
- A suitable backing/fusing material may be required to conceal long float threads, knots or stitching. The backing should completely conceal the stitched area. The backing or fusing material should be securely attached.
- Backing paper used during the embroidery process should be completely removed.
- Heat-applied or glued items (Appliques, Badges, Backing Fabric, Fusing and Interlining) should be securely attached. Follow the manufacturer's application instructions to ensure effective adhesion.
- The application processes must be consistent throughout production. Ensure that the attachment methods and critical quality points are adequately controlled to deliver consistency and reproducibility.

## Children's Apparel & Accessories – Part 2: Risk Assessment Worksheets

### 2.1: Applique, Badges, Embroidery

Functional Requirements			Assessment and Testing Requirements				
Hazards	Risks	Safety Requirements	Preliminary Assessment	Further Testing / Assessment			
			Conduct "Further Testing" if risks are identified →	2 <sup>nd</sup> Level Assessment	Ages <3	Ages ≥3 and ≤ 7	Ages >7 and ≤14
<b><u>Choking &amp; Ingestion</u></b>	Applique/badges and embroidery may become detached by: <ul style="list-style-type: none"> <li>▪ Pulling</li> <li>▪ Sucking</li> <li>▪ Unravelling</li> <li>▪ Delamination</li> </ul>	Applique/badges/embroidery and any backing or fusing material used must be securely attached.	<u>Applique/Badge</u> Pull & twist on applique/badges to assess ease with which it detaches  <u>Embroidery</u> Visual review of stitching quality  <u>Backing/Fusing</u> Visual review and pull & twist to assess ease with which it detaches.	Test as per AS/NZS ISO 8124.1 70 N pull test	<u>Applique/Badge</u> Required for heat applied badges or when preliminary assessment fails or has cause for concern	<u>Applique/Badge</u> Required for age groups up to 5 years. Optional for 6 plus.	Optional
			Tactile review for sharp or pointy edges	"Panel Review": Seek feedback from peers.	Required	Required	Recommended
<b><u>Sharp Edges &amp; Points</u></b>	Applique or badges may have sharp edges due to the: <ul style="list-style-type: none"> <li>▪ stitching threads cutting through the material</li> <li>▪ finish applied ( heat sealing or laser cut)</li> </ul> Badges attached to garments with a pin.	Applique and badges should be free from sharp edges  Pins used for the purpose of attaching badges or brooches to garments should have a safety catch.	Visual Assessment  Recommend an alternate design or component	"Panel Review": Seek feedback from peers.	Safety Catch required	Safety catch: Required for age groups up to 5 years. Optional for 6 plus	Optional

## Children’s Apparel & Accessories – Part 2: Risk Assessment Worksheets

### 2.1: Applique, Badges, Embroidery

Functional Requirements			Assessment and Testing Requirements				
Hazards	Risks	Safety Requirements	Preliminary Assessment Conduct “Further Testing” if risks are identified →	Further Testing / Assessment			
				2 <sup>nd</sup> Level Assessment	Ages <3	Ages ≥3 and ≤ 7	Ages >7 and ≤14
<b><u>Sharp Edges &amp; Points</u></b>	Badges that are shaped intentionally by design or manufactured with sharp or pointy edges.	Badges should not create a sharp or pointy edge.	Tactile review for sharp or pointy edges.	“Panel Review”: Seek feedback from peers.	Required	Required	Recommended
<b><u>Chemical Toxicity</u></b>	The material, coatings or the substance contained within the filling of badges may contain chemicals that are hazardous when in oral or skin contact.	Badges should not contain any of the known irritants: <ul style="list-style-type: none"> <li>▪ as listed in AS/NZ ISO 8124.3 Migration of certain elements</li> <li>▪ as listed/recognised as health risks (refer to “Hazards: Chemical Toxicity”)</li> </ul>	Consult supplier to confirm that no coatings or materials contain chemicals known to cause skin irritations or health problems.  Find alternate source of materials, coatings etc. when verification cannot be obtained.	Test as per AS/NZ ISO 8124.3 Standard &/or Refer to “Hazards: Chemical Toxicity” section for further info.	Optional after preliminary assessment when there is a cause for concern	Optional after preliminary assessment when there is a cause for concern	Optional after preliminary assessment when there is a cause for concern

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## Children's Apparel & Accessories – Part 2: Risk Assessment Worksheets

### 2.2: Beads & Jewel Trims

**GUIDELINES FOR USE:** Use this worksheet to facilitate a risk assessment for products containing buttons:

1. Consider the recommendations contained within the “Design Considerations” text box.
2. Assess each of the potential hazards by first understanding the “Functional Requirements”, then conducting the “Preliminary Assessment” (as required).
3. Proceed to “Further Testing” where the “Preliminary Assessment” is inconclusive or to obtain independent safety and performance evaluations

#### SCOPE:

This section provides recommendations for the design and manufacture of children's clothing in relation to the use of beads and jewel trims to promote safety and minimise risks.

Beads & Jewel trims, though commonly used for all forms of apparel, have the potential to create safety hazards: Especially for small children.

Beads & jewel trims that are poorly attached to garments or that easily break can become a “small part” that is easily mouthed and swallowed by young children.

Sharp or pointy edges that can scratch or pierce a child's skin can arise through poor quality or badly attached beading or jewel trims.

Coatings and materials used for beads or jewels may contain chemicals that are hazardous for children who are known to frequently mouth such items.

#### DESIGN CONSIDERATIONS:

The following is recommended:

- Beading & Jewel trims should remain attached under the allocated care instruction, and throughout the life of the product
- Claws of jewels should be avoided for young age groups. When used, claws should be fully clamped to ensure that they remain enclosed.
- Beading and jewel trims made from glass, ceramic, natural materials such as wood & shell are not recommended because they can crack and break easily when bitten by young children.
- Machine lock stitching is the recommended form of attachment.
- Hand stitched beads should be back-stitched and knotted off securely to avoid detachment.
- Long loops and threads on internal or external areas of product should be trimmed.
- A suitable backing material may be required to conceal long float threads, knots or stitching and to fully secure a bead or jewel trim from detaching. For example, backing fabrics may be required for reinforcement in instances where the base fabric is light weight.
- Consideration should be given to the positioning of beads and jewels that pass across the face when a garment is removed.

## Children's Apparel & Accessories – Part 2: Risk Assessment Worksheets

### 2.2: Beads & Jewel Trims

Functional Requirements			Assessment and Testing Requirements				
Hazards	Risks	Safety Requirements	Preliminary Assessment Conduct "Further Testing" if risks are identified →	Further Testing / Assessment			
				2 <sup>nd</sup> Level Assessment	Ages <3	Ages ≥3 and ≤ 7	Ages >7 and ≤14
<b><u>Choking &amp; Ingestion</u></b>	Beads/Jewel trims may become detached by: <ul style="list-style-type: none"> <li>▪ Pulling</li> <li>▪ Sucking</li> <li>▪ Unravelling</li> </ul>	Beads & Jewel trims must be securely attached. Jewels should be fully secure in claws	Pull & twist on bead or jewel to assess ease with which it detaches	Test as per AS/NZS 8124 70 N pull test	Required for all beads & jewels that are >3mm	Required for age groups up to 5 years.  Optional for 6 plus.	Not required
<b><u>Sharp Edges &amp; Points</u></b>	Beads or jewel trims may crack, break or have burrs	Beads or jewels must not create sharp or pointy edges if they crack or break during use Beads or jewels should not have burrs	Tactile review for sharp, pointy edges & burrs	"Panel Review": Seek feedback from peers.	Required	Required	Recommended
	Jewels that are shaped intentionally by design or manufactured with sharp or pointy edges	No part of a jewel should have a sharp or pointy edge.	Tactile review for sharp or pointy edges	"Panel Review": Seek feedback from peers.	Required	Required	Recommended

## Children's Apparel & Accessories – Part 2: Risk Assessment Worksheets

### 2.2: Beads & Jewel Trims

Functional Requirements			Assessment and Testing Requirements				
Hazards	Risks	Safety Requirements	Preliminary Assessment Conduct "Further Testing" if risks are identified →	Further Testing / Assessment			
				2 <sup>nd</sup> Level Assessment	Ages <3	Ages ≥3 and ≤ 7	Ages >7 and ≤14
<b>Chemical Toxicity</b>	<p>Beads or jewel trim materials or coatings may contain chemicals that are hazardous when in oral contact</p> <p>Materials used for beads and jewels may cause irritations when in contact with the skin</p>	<p>Beads &amp; jewel trims should not contain any of the known irritants:</p> <ul style="list-style-type: none"> <li>▪ as listed in AS/NZ ISO 8124.3 Migration of certain elements</li> <li>▪ as listed/recognised as potential health risks by reputable bodies (refer to "<i>Hazards: Chemical Toxicity</i>")</li> </ul>	<p>Consult supplier to confirm that no coatings or materials contain chemicals known to cause skin irritations or health problems.</p> <p>Find alternate source of materials, coatings etc. when verification cannot be obtained.</p>	<p>Test as per AS/NZ ISO 8124.3 Standard</p> <p>&amp;/or</p> <p>Refer to "<i>Hazards: Chemical Toxicity</i>" section for further info.</p>	<p>Optional after preliminary assessment when there is a cause for concern</p>	<p>Optional after preliminary assessment when there is a cause for concern</p>	<p>Optional after preliminary assessment when there is a cause for concern</p>

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## Children's Apparel & Accessories – Part 2: Risk Assessment Worksheets

### 2.3: Bows, Fabric Loops, Hanger Loops, Decorative & 3D Motifs

**GUIDELINES FOR USE:** Use this worksheet to facilitate a risk assessment for products containing buttons:

1. Consider the recommendations contained within the “Design Considerations” text box.
2. Assess each of the potential hazards by first understanding the “Functional Requirements”, then conducting the “Preliminary Assessment” (as required).
3. Proceed to “Further Testing” where the “Preliminary Assessment” is inconclusive or to obtain independent safety and performance evaluations

#### SCOPE:

This section provides recommendations for the design and manufacture of children's clothing in relation to the use of bows and similar attachments to promote safety and minimise risks.

Bows, Fabric Loops, Hanger Loops, Decorative and 3D Motifs, though commonly used for all forms of apparel, have the potential to create safety hazards: Especially for small children.

Those that are poorly attached to garments or that easily detach or separate can become a “small part” that is easily mouthed and swallowed by young children.

Sharp or pointy edges that can scratch or pierce a child's skin can arise through use of inappropriate components (e.g. wire ribbon).

Entrapment, Entanglement, or strangulation can occur if loop sizes are not limited and controlled.

#### DESIGN CONSIDERATIONS:

The following is recommended:

- Bows, fabric loops, decorative and 3D motifs should remain attached under the allocated care instruction and throughout the life of the product.
- Bows and fabric loops should be securely constructed and stitched down so that they do not unravel
- Bow ends and ribbon trims to be adequately sealed, or, single/ double turned and stitched down or bar tacked to prevent fraying
- Wired ribbon is not recommended because it poses a risk of injury to the child if the wire protrudes from the fabric.
- Heat sealed ends or laser cut fabrics should not have sharp edges
- If machine stitching, machine lock stitching is the recommended form of attachment
- Hand stitched bows, fabric loops or motifs are not recommended for children up to 3. For hand stitched items above this age group, ensure that the trim is backstitched and secured thoroughly with stitching knotted off adequately to avoid detachment
- To maximise the strength of attachment when hand stitching it is recommended that multiple threads are not passed through the eye of the needle
- Long loops & threads on internal or external area of product should be trimmed off
- A suitable backing material may be required to conceal long float threads, knots or stitching. Backing fabrics are recommended in instances where the base fabric is lightweight & reinforcement may be necessary to assist in securing attachment

## Children's Apparel & Accessories – Part 2: Risk Assessment Worksheets

### 2.3: Bows, Fabric loops, Hanger Loops, Decorative & 3D Motifs

Functional Requirements			Assessment and Testing Requirements					
Hazards	Risks	Safety Requirements	Preliminary Assessment Conduct "Further Testing" if risks are identified →	Further Testing / Assessment				
				2 <sup>nd</sup> Level Assessment	Ages <3	Ages ≥3 and ≤ 7	Ages >7 and ≤14	
<b><u>Choking &amp; Ingestion</u></b>	Trims become detached by: <ul style="list-style-type: none"> <li>▪ Pulling</li> <li>▪ Sucking</li> <li>▪ Unravelling</li> </ul>	Bows, loops etc. must be securely attached	→	Pull & twist on trim to assess ease with which it detaches	Test as per AS/NZS ISO 8124.1 70 N pull test	Required for all trims (except hanger loops)	Required for all trims (except hanger loops)	Recommended
	Glued Trims become detached due to delamination or glue failure	Glue Trims must remain securely attached.	→	Pull & twist on trim to assess ease with which it detaches Glue Trims not recommended Ages <3.	Test as per AS/NZS ISO 8124.1 70 N pull test	Required.	Required	Recommended
<b><u>Sharp Edges &amp; Points</u></b>	Risk of injury due to sharp edge/point	Bows, tapes etc. should be free from sharp edges	→	Tactile review for sharp or pointy edges.  Recommend an alternate design or component.	"Panel Review": Seek feedback from peers.	Required	Required	Required

## Children's Apparel & Accessories – Part 2: Risk Assessment Worksheets

### 2.3: Bows, Fabric loops, Hanger Loops, Decorative & 3D Motifs

Functional Requirements			Assessment and Testing Requirements				
Hazards	Risks	Safety Requirements	Preliminary Assessment Conduct "Further Testing" if risks are identified →	Further Testing / Assessment			
				2 <sup>nd</sup> Level Assessment	Ages <3	Ages ≥3 and ≤ 7	Ages >7 and ≤14
<b><u>Strangulation &amp; Entrapment</u></b>	Bows and Fabric Loops that are too long can: <ul style="list-style-type: none"> <li>▪ Pose entrapment hazard of appendages</li> <li>▪ Cut off blood flow to appendages</li> <li>▪ Be caught on obstacles</li> </ul>	Fabric loops and bows should be engineered so that any free ends should not fall within the high risk zones as set out in the Draw cord and Functional ties risk assessment worksheet within the related diagram and images section	Assess the feature for free ends. Conduct risk assessment:	"Panel Review": Seek feedback from peers.	Refer to: <ul style="list-style-type: none"> <li>• Draw cord and function ties risk assessment work sheet for testing requirements</li> <li>• Risk zone diagrams</li> </ul>		
	Hanger loops that are not removed prior to wearing can: <ul style="list-style-type: none"> <li>▪ Pose entrapment hazard of appendages</li> <li>▪ Cut off blood flow to appendages</li> <li>▪ Be caught on obstacles</li> </ul>	For childrens' products, it is <b>important</b> to provide adequate warnings about the hazard and advice regarding safe disposal.	Ensure appropriate Warnings have been applied to hanger loops (i.e. to advise removal of hanger loops)	"Panel Review": Seek feedback from peers.	Required		

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## Children's Apparel & Accessories – Part 2: Risk Assessment Worksheets

### 2.4: Buttons

**GUIDELINES FOR USE:** Use this worksheet to facilitate a risk assessment for products containing buttons:

1. Consider the recommendations contained within the “Design Considerations” text box.
2. Assess each of the potential hazards by first understanding the “Functional Requirements”, then conducting the “Preliminary Assessment” (as required).
3. Proceed to “Further Testing” where the “Preliminary Assessment” is inconclusive or to obtain independent safety and performance evaluations

#### SCOPE:

Buttons, though commonly used for all forms of apparel, have the potential to create safety hazards: Especially for small children.

Buttons that are poorly attached to garments or that easily break or separate can become a “small part” that is easily mouthed and swallowed by young children.

Sharp or pointy edges that can scratch or pierce a child's skin can arise through poor design (e.g. star shapes) or when buttons break too easily.

Coatings and materials used for buttons may contain chemicals that are hazardous for children who are known to frequently mouth such items.

#### DESIGN CONSIDERATIONS:

The following is recommended:

- Buttons should remain attached under the allocated care instruction, and throughout the life of the product.
- Avoid using buttons that resemble food: Especially for ages under 3.
- The method of providing/attaching spare buttons should also be risk assessed.
- Avoid using fusing to support button attachment: Especially for ages under 3.
- Avoid using furry or pile fabrics to cover buttons: Especially for ages under 3.
- Special consideration should be given to the shape and profile of buttons that pass across the face when a garment is removed.

## Children's Apparel & Accessories – Part 2: Risk Assessment Worksheets

### 2.4: Buttons

Functional Requirements			Assessment and Testing Requirements				
Hazards	Risks	Safety Requirements	Preliminary Assessment Conduct "Further Testing" if risks are identified →	Further Testing / Assessment			
				2 <sup>nd</sup> Level Assessment	Ages <3	Ages ≥3 and ≤ 7	Ages >7 and ≤14
<b><u>Choking &amp; Ingestion</u></b>	Buttons become detached by: <ul style="list-style-type: none"> <li>▪ Pulling</li> <li>▪ Sucking</li> <li>▪ Unravelling</li> </ul>	Buttons must be securely attached	Pull & twist button to assess ease with which it detaches	Test as per AS/NZS ISO 8124.1 70 N pull test	Required	Required up to 5 years. Optional for 6 plus.	Optional
	Multi-component button separating into pieces	Multi-component and assembled buttons must not separate under any circumstances of use	Manipulate buttons to assess ease with which parts separate	Test as per AS/NZS ISO 8124.1	Required	Optional. Recommended for transitional age groups	Not required
<b><u>Sharp Edges &amp; Points</u></b>	Buttons crack or break	Buttons must not create sharp or pointy edges if they crack or break during use	Tactile review for sharp or pointy edges: Bend & stress button to assess ease of breakage	"Panel Review": Seek feedback from peers.	Required	Required	Recommended
	Buttons are designed or manufactured with sharp or pointy edges	No part of a button should create a sharp or pointy edge	Tactile review for sharp or pointy edges	"Panel Review": Seek feedback from peers.	Required	Required	Recommended
<b><u>Chemical Toxicity</u></b>	Button materials or coatings contain chemicals known to cause skin irritation or health problems	Buttons should not contain any of the known irritants: <ul style="list-style-type: none"> <li>▪ as listed in AS/NZ ISO 8124.3 Migration of certain elements</li> <li>▪ as listed/recognised as health risks by other reputable bodies (refer to "<a href="#">Hazards: Chemical Toxicity</a>")</li> </ul>	Consult supplier to confirm that no coatings or materials contain chemicals known to cause skin irritations or health problems  Find alternate source of materials, coatings etc. when verification cannot be obtained	Test as per AS/NZS ISO 8124.3 Standard  &/or  Refer to <a href="#">Hazard - Chemical Toxicity</a> section for further info.	Optional after preliminary assessment when there is a cause for concern	Optional after preliminary assessment when there is a cause for concern	Optional after preliminary assessment when there is a cause for concern

## Children's Apparel & Accessories – Part 2: Risk Assessment Worksheets

### 2.5: Diamantes, Glued & Heat-sealed Decorations

**GUIDELINES FOR USE:** Use this worksheet to facilitate a risk assessment for products containing buttons:

1. Consider the recommendations contained within the “Design Considerations” text box.
2. Assess each of the potential hazards by first understanding the “Functional Requirements”, then conducting the “Preliminary Assessment” (as required).
3. Proceed to “Further Testing” where the “Preliminary Assessment” is inconclusive or to obtain independent safety and performance evaluations

#### SCOPE:

Glued/heat-sealed decorations, commonly used for all forms of apparel, have the potential to create safety hazards: Especially for small children.

Glued/heat-sealed decorations that are poorly attached to garments can peel away become detached, creating a “small part” that could easily be mouthed and swallowed by young children.

Sharp or pointy edges as a result of poor design choices, can scratch or pierce a child's skin (e.g. star shapes).

Coatings and materials used for glued/heat-sealed decorations may contain chemicals that are hazardous for children who are known to frequently mouth such items.

#### DESIGN CONSIDERATIONS:

The following is recommended:

- Diamantes and other glued/heat sealed decorations should remain attached under the allocated care instruction, and throughout the life of the product.
- Avoid using glued/heat-sealed decorations that resemble toys / food: Especially for ages under 3.
- Special consideration should be given to the appropriate attachment method for uneven surfaces such as velour, piles, flocked prints, ribs, brushed and printed fabrics that may compromise their attachment.
- Avoid glued/heat-sealed decorations made from glass as they crack and break easily
- Avoid glued/heat-sealed decorations with sharp, rough or burred edges which may cause injuries
- Maximum adhesion to be obtained using the most suitable application process, it must be consistent throughout entire production.
- It is recommended that cold, gentle machine/hand wash care is suitable for most glued on decorations.

## Children's Apparel & Accessories – Part 2: Risk Assessment Worksheets

### 2.5: Diamantes, Glued & Heat-sealed Decorations

Functional Requirements			Assessment and Testing Requirements				
Hazards	Risks	Safety Requirements	Preliminary Assessment Conduct "Further Testing" if risks are identified →	Further Testing / Assessment			
				2 <sup>nd</sup> Level Assessment	Ages <3	Ages ≥3 and ≤ 7	Ages >7 and ≤14
<b><u>Choking &amp; Ingestion</u></b>	Decorations may become detached by: <ul style="list-style-type: none"> <li>▪ Laundering</li> <li>▪ Picking</li> <li>▪ Poor attachment</li> <li>▪ Sucking</li> </ul>	Decorations must be securely attached.  If detached in use or during laundering, the size of pieces should be assessed based on age	Pick/pull-at decorations to assess ease with which it detaches. &/or Perform wash/durability tests: 3 x wash/dry cycles as per allocated care instruction	Test as per AS/NZS ISO 8124.1 70 N pull test  Test as per AS/NZS ISO 8124.1 70 N pull test	Required for all decorations that are >3mm.  Required	Required for age groups up to 5 years Optional for 6 plus  Recommended	Optional  Optional
<b><u>Sharp Edges &amp; Points</u></b>	Decorations that are shaped intentionally by design or manufactured with sharp or pointy edges.  Decorations may crack, break or have burrs.	Decorations must have smooth and rounded edges/corners	Tactile review for sharp and pointy edges	"Panel Review": Seek feedback from peers.	Required	Required	Recommended
<b><u>Chemical Toxicity</u></b>	Glued/heat-sealed decorations may contain chemicals, solvents known to cause skin irritation or health problems	Glued/heat-sealed decorations should not contain any of the known irritants <ul style="list-style-type: none"> <li>▪ as listed in AS/NZ ISO 8124.3 Migration of certain elements</li> <li>▪ as listed/recognised as potential health risks by reputable bodies (refer to "<i>Hazards: Chemical Toxicity</i>")</li> </ul>	Consult supplier to confirm that no coatings or materials contain chemicals known to cause skin irritations or health problems  Find alternate source of materials, coating etc. when verification cannot be obtained.	"Panel Review": Seek feedback from peers.	Optional after preliminary assessment when there is a cause for concern	Optional after preliminary assessment when there is a cause for concern	Optional after preliminary assessment when there is a cause for concern

## Children's Apparel & Accessories – Part 2: Risk Assessment Worksheets

### 2.6: Drawcords, Functional Ties, Decorative Ties & Sashes

**GUIDELINES FOR USE:** Use this worksheet to facilitate a risk assessment for products containing buttons:

1. Consider the recommendations contained within the “Design Considerations” text box.
2. Assess each of the potential hazards by first understanding the “Functional Requirements”, then conducting the “Preliminary Assessment” (as required).
3. Proceed to “Further Testing” where the “Preliminary Assessment” is inconclusive or to obtain independent safety and performance evaluations

#### SCOPE:

This section provides recommendations for the design and manufacture of children's clothing in relation to the use of drawcords, functional and decorative ties. Drawcords, functional ties, decorative ties and sashes though commonly used for all forms of apparel, have the potential to create safety hazards for children of all ages which include entrapment, strangulation, entanglement and tripping hazards. These can lead to serious injury or death.

Dangers arise through normal children's behaviour and activities, often under minimal supervision: Such as playing in playgrounds, climbing trees and travelling by bus, train or bicycle. Such activities create risks such as entrapment, strangulation, entanglement and tripping.

#### DESIGN CONSIDERATIONS:

The following is recommended:

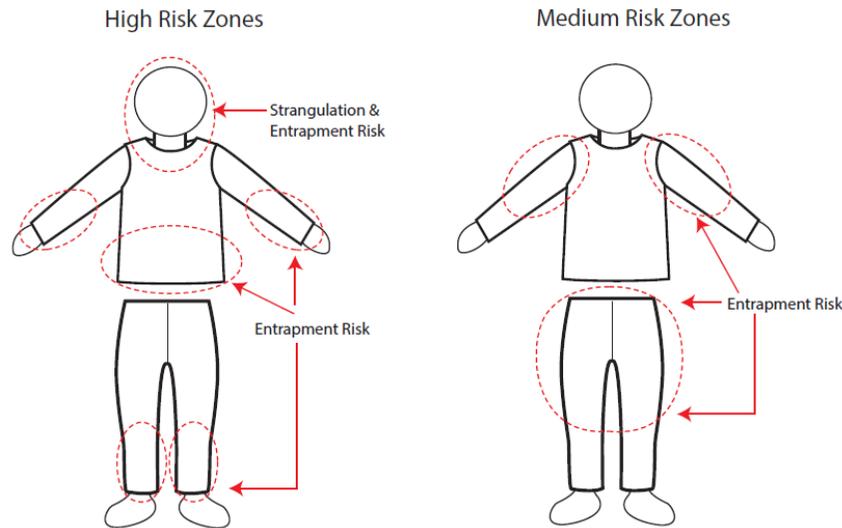
- Drawstrings should be sewn or securely attached to the garment at their midpoint so they cannot be pulled through.
- Toggles and knots at the ends of drawcords, functional ties and decorative ties are not recommended as they can create a “hook” or stopper that may get caught in small spaces, or may become detached causing a choking hazard to young children. Other alternatives for finishing ends such as sealed ends should be considered.
- Decorative items when attached to drawcords and ties can pose a choking hazard for young children. Due care in reviewing these accessories should be considered. Refer to the relevant Risk Assessment Worksheet within the Appendix.
- Functional ties and decorative ties should not be made from elastic. Due to the extensibility of elastic, there is risk of injury to children of all ages.
- Avoid using drawcords, functional ties and decorative ties around hood/neck area, below the elbow and below the knee as these pose a high risk of entrapment and tripping hazard to children. Refer to the High risk zone and medium diagrams below.
- When designing a garment with a sash or tied-belt the width should be no less than 30 mm.
- When halter neck and shoulder ties are tied up their loose ends should be restricted to minimise the risk of entrapment hazards. Please note that these types of ties have a low risk associated with strangulation.

# Children's Apparel & Accessories – Part 2: Risk Assessment Worksheets

## 2.6: Drawcords, Functional Ties, Decorative Ties & Sashes

### Related Diagrams & Images

#### RISK ZONE DIAGRAMS



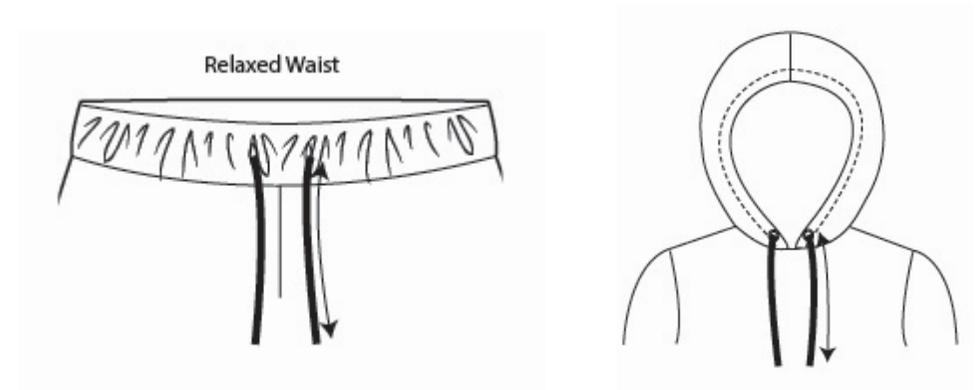
#### High Risk

- Head & neckline
- Elbow to wrist
- Waist to hem of tops & dresses
- Knee to ankle

#### Medium Risk

- Shoulder to elbow
- Waist to knee on shorts, dresses & skirts

#### MEASURING DIAGRAMS



#### How to measure:

- 1) Relax the opening (i.e. not stretched or gathered)
- 2) Extend the cord without contracting the opening
- 3) Measure the length from eyelet, exit point or point of attachment.

## Children's Apparel & Accessories – Part 2: Risk Assessment Worksheets

### 2.6: Drawcords, Functional Ties, Decorative Ties & Sashes

<i>Functional Requirements</i>			<i>Assessment and Testing Requirements</i>				
Hazards	Risks	Safety Requirements	Preliminary Assessment Conduct "Further Testing" if risks are identified →	Further Testing / Assessment			
				2 <sup>nd</sup> Level Assessment	Ages <3	Ages ≥3 and ≤ 7	Ages >7 and ≤14
<ul style="list-style-type: none"> <li>• <b><u>Strangulation</u></b></li> <li>• <b><u>Entrapment</u></b></li> <li>• <b><u>Tripping</u></b></li> <li>• <b><u>Entanglement</u></b></li> </ul>	<p><b><u>Drawcords, functional ties and sashes</u></b> create risks of being:</p> <ul style="list-style-type: none"> <li>▪ Caught</li> <li>▪ Pulled off</li> <li>▪ Entangled</li> </ul> <p><b>High risk zone:</b> Determined by the position on a garment/ body. Refer to the risk zone diagrams.</p> <p><b>Medium risk zone:</b> Determined by the position on a garment/ body. Refer to risk zone diagrams.</p>	<p>Drawcords and functional ties should be engineered to minimise risks by:</p> <ul style="list-style-type: none"> <li>▪ Adopting lower-risk non-functional options</li> <li>▪ Being designed for quick release</li> <li>▪ Use of tabs that are adjustable in high risk zones</li> <li>▪ Avoid using functional ties and drawcords around high risk zones</li> <li>▪ Reducing length of "free ends"</li> <li>▪ Preventing easy removal</li> <li>▪ Refer to Design Considerations</li> </ul>	<p>Proceed to "Further testing" Conduct risk assessment: Refer to risk zone diagrams</p>	<p>Measure the length of draw cord or functional tie on a relaxed garment.</p> <p>Refer to measuring diagrams.</p>	<p><b>High risk zone:</b> Not recommended</p> <p><b>Medium risk zone:</b> Not recommended. If used: Drawcord and functional ties on a relaxed garment:</p> <ol style="list-style-type: none"> <li>1) should not exceed 14 cm from the point of protrusion, and</li> <li>2) should remain outside the high risk zones.</li> </ol>	<p><b>High risk zone:</b> Not recommended. If used, draw cord and functional ties on a relaxed garment should not exceed 14cm from the point of protrusion.</p> <p><b>Medium risk zone:</b> Drawcord and functional ties on a relaxed garment</p> <ol style="list-style-type: none"> <li>1) should not exceed 14 cm from the point of protrusion, and</li> <li>2) should remain outside the high risk zones.</li> </ol>	
		<p>Sashes and tied-belts: During the design stage, careful consideration should be given to the application and attachment of the sash/tied - belts.</p>					<p>A sash or tied-belt when untied should not hang below the hem of the garment.</p>

## Children's Apparel & Accessories – Part 2: Risk Assessment Worksheets

### 2.6: Drawcords, Functional Ties, Decorative Ties & Sashes

<i>Functional Requirements</i>			<i>Assessment and Testing Requirements</i>				
Hazards	Risks	Safety Requirements	Preliminary Assessment Conduct "Further Testing" if risks are identified →	Further Testing / Assessment			
				2 <sup>nd</sup> Level Assessment	Ages <3	Ages ≥3 and ≤ 7	Ages >7 and ≤14
<ul style="list-style-type: none"> <li>• <b><u>Entrapment</u></b></li> <li>• <b><u>Tripping</u></b></li> </ul>	<p><b><u>Decorative ties</u></b> create risks of being:</p> <ul style="list-style-type: none"> <li>▪ Caught</li> <li>▪ Pulled off</li> <li>▪ Entangled</li> </ul> <p><b>High risk zone:</b> Determined by the position on a garment/ body, refer to the High risk zone diagram above.</p> <p><b>Medium risk zone:</b> Determined by the position on a garment/ body, refer to medium risk zone diagram above</p>	<p>Decorative ties should be engineered to minimise risks by:</p> <ul style="list-style-type: none"> <li>▪ Avoid using decorative ties around high risk zones</li> <li>▪ Refer to Design Considerations</li> </ul>	<p>Proceed to "Further testing" Conduct risk assessment: Refer to risk zone diagrams.</p>	<p>Measure the length of decorative ties. Refer to measurement diagrams.</p>	<p><b>High risk zone:</b> Not recommended</p> <p><b>Medium risk zone:</b> Not recommended. If used:</p> <ol style="list-style-type: none"> <li>1) Free ends should not exceed 14 cm from the point of attachment, and</li> <li>2) Free ends should remain outside the high risk zones.</li> </ol>	<p><b>High risk zone:</b> Not recommended. If used, Free ends should not exceed 14 cm from the point of attachment</p> <p><b>Medium risk zone:</b></p> <ol style="list-style-type: none"> <li>1) Free ends should not exceed 14 cm from the point of attachment, and</li> <li>2) Free ends should remain outside the high risk zones.</li> </ol>	

### 2.7: Gifts with Purchase (GWP)

**GUIDELINES FOR USE:** Use this worksheet to facilitate a risk assessment for products containing buttons:

1. Consider the recommendations contained within the “Design Considerations” text box.
2. Assess each of the potential hazards by first understanding the “Functional Requirements”, then conducting the “Preliminary Assessment” (as required).
3. Proceed to “Further Testing” where the “Preliminary Assessment” is inconclusive or to obtain independent safety and performance evaluations

#### **SCOPE:**

This section provides recommendations on how to risk assess “Gifts with Purchase” that often accompany children’s apparel. These can be any variety of items, from toys, toy-like packaging, costume jewellery, hair accessories etc.

Traditional risk assessments focus on the safety of the product itself.

GWP’s must be assessed for their age appropriateness and meet relevant standards (i.e. AS/NZS ISO 8124 Toy Standard).

If GWP’s are attached to a garment at point of sale, the method of attachment itself (such as long ties or sharp pins) needs to be risk assessed to ensure it does not pose any danger to children,

#### **DESIGN CONSIDERATIONS:**

The following is recommended:

- Avoid GWP’s that resemble food
- Ensure GWP’s comply with applicable mandatory safety standards and regulations.

## Children's Apparel & Accessories – Part 2: Risk Assessment Worksheets

### 2.7: Gifts with Purchase (GWP)

<i>Functional Requirements</i>			<i>Assessment and Testing Requirements</i>				
Hazards	Risks	Safety Requirements	Preliminary Assessment Conduct "Further Testing" if risks are identified →	Further Testing / Assessment			
				2 <sup>nd</sup> Level Assessment	Ages <3	Ages ≥3 and ≤ 7	Ages >7 and ≤14
<b><u>Choking &amp; Ingestion</u></b>	GWP may be very small and could be ingested easily.  GWP may have small components.	Small components must be attached in a manner that guarantees they cannot become detached.  GWP items must not be able break, separate and should be constructed in such a way that small components do not pose a risk.	Check size of the GWP.  Inspect/examine: Identify the presence of any componentry that could become a potential choking hazard.	Identify small part hazards as per  Test as per AS/NZS ISO 8124.1	GWP's that are small or can create small parts are not suitable for this age group.	Minimise use of such items.  If present: Provide safety warnings & disposal advice	If present: Provide safety warnings & disposal advice
	Twist-ties, strings, pins or Kimble may be used to attach GWP.	Where deemed appropriate, provide adequate warnings about the potential hazard and advice regarding safe disposal.	Inspect/examine: Identify the presence of any packaging related componentry that could become a potential choking hazard.	Identify small part hazards as per  Test as per AS/NZS ISO 8124.1	Optional	Optional	Optional
<b><u>Sharp Edges &amp; Points</u></b>	GWP or components that could contain sharp/pointy edges that can cause scratch or laceration injuries.	No item should have a sharp or pointy edge.	Tactile review of all packaging components for sharp or pointy edges.	"Panel Review": Seek feedback from peers.	Minimise use of such items.  Seek alternative to avoid risks entirely.	Minimise use of such items.  Seek alternative to avoid risks entirely.	Minimise use of such items.
	GWP could be attached with pins or mechanisms having sharp/pointy edges that can cause scratch or laceration injuries.	No item should have a sharp or pointy edge.	Review multiple pieces to ensure consistency.				

## Children's Apparel & Accessories – Part 2: Risk Assessment Worksheets

### 2.7: Gifts with Purchase (GWP)

<i>Functional Requirements</i>			<i>Assessment and Testing Requirements</i>				
Hazards	Risks	Safety Requirements	Preliminary Assessment Conduct "Further Testing" if risks are identified →	Further Testing / Assessment			
				2 <sup>nd</sup> Level Assessment	Ages <3	Ages ≥3 and ≤ 7	Ages >7 and ≤14
<b><u>Chemical Toxicity</u></b>	Materials used for GWP may contain chemicals known to cause irritation.	Materials used for GWP should not contain any known chemicals to cause skin irritations or sensitivities.	Consult supplier to confirm that no coatings or materials contain chemicals known to cause skin irritations or health problems  Find alternate source of materials, coatings etc. when verification cannot be obtained.	Test as per AS/NZ ISO 8124.3 Standard  &/or  Refer to <i>Hazard - Chemical Toxicity</i> section for further info.	Avoid use at all times.	Avoid use at all times.	Avoid use at all times.
<b><u>Strangulation &amp; Entrapment</u></b>	Twist-ties, strings, pins or Kimble may be used to attach GWP. Long strings or ties could wrap around neck, fingers etc. and cause strangulation or ligature constriction (ischaemic) risks.	Avoid the use of long strings or ties. Provide adequate warnings about the hazard and advice regarding safe disposal.	Inspect/examine: Identify the presence of any long strings or ties that could create a hazard in the hands of a child.	"Panel Review": Seek feedback from peers.	Minimise use of such items. If appropriate: Provide safety warnings & disposal advice	If appropriate : Length to be kept to a minimum. Provide safety warnings & disposal advice	If appropriate : Provide safety warnings & disposal advice

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## Children's Apparel & Accessories – Part 2: Risk Assessment Worksheets

### 2.8: Metal Trims, Buckles, Rivets & Snaps

**GUIDELINES FOR USE:** Use this worksheet to facilitate a risk assessment for products containing buttons:

1. Consider the recommendations contained within the “Design Considerations” text box.
2. Assess each of the potential hazards by first understanding the “Functional Requirements”, then conducting the “Preliminary Assessment” (as required).
3. Proceed to “Further Testing” where the “Preliminary Assessment” is inconclusive or to obtain independent safety and performance evaluations

#### SCOPE:

This section provides recommendations for the design and manufacture of children's clothing in relation to the use of metal trims, buckles, rivets and snaps to promote safety and minimise risks.

Metal trims, buckles, rivets & snaps, though commonly used on all forms of children's clothing have the potential to create safety hazards: Especially for small children.

Metal trims, buckles, rivets & snaps that are poorly attached to garments or are poorly constructed can become a safety risk for young children.

Sharp or pointy edges that can scratch or pierce a child's skin can arise through poor quality or construction of metal trims, buckles, rivets or snaps.

Coatings and materials used for metal trims, buckles, rivets or snaps may contain chemicals that are hazardous for children due to known irritants through oral or skin contact.

#### DESIGN CONSIDERATIONS:

The following is recommended:

- Metal trims, buckles, rivets & snap fasteners should remain attached under the allocated care instruction, and throughout the life of the product
- Metal trims, buckles, rivets & snap fasteners should be stitched using adequate stitch tension, density and formation to prevent detachment. Reinforced treatments should be considered for light-weight fabrics.
- Backing material may be required as reinforcement when attaching components to light weight fabrics. The backing material must also be securely attached.
- Metal chain lengths/belts and positioning should be considered to reduce the risk of being caught on other objects.
- Prongs on buckles should not protrude beyond the rim of the buckle. Buckle rims should be indented to allow the prong to lay flush.
- The size & type of the snap fastener should be suited to the fabric weight and thickness. Validate suitability through the snap supplier.
- Snap fasteners should not be applied over seams or on uneven fabric thickness to minimise risk of detachment. Appropriate machine settings in manufacturing must be used to accommodate fabric thickness.
- After production: It is highly recommended that products are inspected for any detached, loose or broken snap fasteners.

## Children's Apparel & Accessories – Part 2: Risk Assessment Worksheets

### 2.8: Metal Trims, Buckles, Rivets & Snaps

Functional Requirements			Assessment and Testing Requirements				
Hazards	Risks	Safety Requirements	Preliminary Assessment Conduct "Further Testing" if risks are identified →	Further Testing / Assessment			
				2 <sup>nd</sup> Level Assessment	Ages <3	Ages ≥3 and ≤ 7	Ages >7 and ≤14
<b><u>Choking &amp; Ingestion</u></b>	Metal trims, buckles, rivets or may become detached by: <ul style="list-style-type: none"> <li>▪ Pulling</li> <li>▪ Sucking</li> <li>▪ Unravelling</li> </ul>	Metal trims, buckles, rivets & snaps must be securely attached	Pull & twist on metal trim & buckle to assess ease with which it detaches	Test as per AS/NZS 8124.1	Required for all metal trims buckles, rivets & snaps	Required for age groups up to 5 years.  Optional for 6 plus.	Optional
	Multicomponent metal trims, buckles, rivets & snaps. Parts may separate	Multicomponent and assembled metal trims, buckles, rivets and snaps must not separate under any circumstances of use	Manipulate all components to assess ease with which any part separates	"Panel Review": Seek feedback from peers.	Required	Required for age groups up to 5 years.  Optional for 6 plus.	Optional
<b><u>Sharp Edges &amp; Points</u></b>	Metal trims, buckles, rivets snaps and all their components may be sharp, break or have burrs	<p>The construction of Metal trims, buckles, rivets and snaps should have smooth surfaces to reduce risk of scratching.</p> <p>Metal trims, buckles, rivets, snaps &amp; all components must not create sharp or pointy edges if they break during use.</p> <p>Beads or jewels should not have burrs</p>	Tactile review for sharp, pointy edges, & burrs	"Panel Review": Seek feedback from peers.	Required	Required	Recommended

## Children's Apparel & Accessories – Part 2: Risk Assessment Worksheets

### 2.8: Metal Trims, Buckles, Rivets & Snaps

<i>Functional Requirements</i>			<i>Assessment and Testing Requirements</i>				
Hazards	Risks	Safety Requirements	Preliminary Assessment Conduct "Further Testing" if risks are identified →	Further Testing / Assessment			
				2 <sup>nd</sup> Level Assessment	Ages <3	Ages ≥3 and ≤ 7	Ages >7 and ≤14
<b><u>Chemical Toxicity</u></b>	Metal trims, buckles, rivets & snaps can be made from materials or coatings that contain chemicals that are hazardous when in oral contact  Materials used may also cause irritations when in contact with the skin	Metal trims, buckles, rivets & snaps should not contain any of the known irritants: <ul style="list-style-type: none"> <li>▪ as listed in AS/NZ ISO 8124.3 Migration of certain elements as listed/recognised as health risks by other reputable bodies (refer to "<i>Hazards: Chemical Toxicity</i>")</li> </ul>	Consult supplier to confirm that no coatings or materials contain chemicals known to cause skin irritations or health problems.  Find alternate source of materials, coatings etc. when verification cannot be obtained.	Test as per AS/NZ ISO 8124.3 Standard  &/or  Refer to <i>Hazards: Chemical Toxicity</i> section for further info.	Optional after preliminary assessment when there is cause for concern.	Optional after preliminary assessment when there is cause for concern.	Optional after preliminary assessment when there is cause for concern.

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## Children's Apparel & Accessories – Part 2: Risk Assessment Worksheets

### 2.9: Novelties

**GUIDELINES FOR USE:** Use this worksheet to facilitate a risk assessment for products containing buttons:

1. Consider the recommendations contained within the “Design Considerations” text box.
2. Assess each of the potential hazards by first understanding the “Functional Requirements”, then conducting the “Preliminary Assessment” (as required).
3. Proceed to “Further Testing” where the “Preliminary Assessment” is inconclusive or to obtain independent safety and performance evaluations

#### SCOPE:

Traditional risk assessments focus on the safety of known product features, such as buttons, zippers, prints and common decorations etc.

However new trends and technological advances are constantly emerging. Examples are such features as magnetic closures, battery operated trims, draw strings functioning as head-sets etc. These novelties also have to be assessed for their safety and age appropriateness.

#### DESIGN CONSIDERATIONS:

The following is recommended:

- A novelty item should remain attached under the allocated care instruction and throughout the life of the product.
- As the complexity and variety of design options is limitless in this space: Only a general safety overview is provided in these guidelines.
- The true value of conducting a “comprehensive risk assessment” is demonstrated for novelty items.

## Children's Apparel & Accessories – Part 2: Risk Assessment Worksheets

### 2.9: Novelties

Functional Requirements			Assessment and Testing Requirements				
Hazards	Risks	Safety Requirements	Preliminary Assessment Conduct "Further Testing" if risks are identified →	Further Testing / Assessment			
				2 <sup>nd</sup> Level Assessment	Ages <3	Ages ≥3 and ≤ 7	Ages >7 and ≤14
<b><u>Choking &amp; Ingestion</u></b>	Items that are small, can be dismantled into smaller parts, or can become loose or detached.	All items must be securely attached and contained adequately so they pose no risk to the wearer.	Inspect/examine: Identify the presence of any componentry that could become a potential choking hazard.	Identify small part hazards as per AS/NZS ISO 8124.1 70 N Pull Test	Avoid use at all times.	Minimise use of such items.	Minimise use of such items.
<b><u>Sharp Edges &amp; Points</u></b>	Items that are shaped intentionally by design by design or manufactured with sharp or pointy edges. Inconsistent manufacturing or weak material that can break etc. can also pose a risk.	Where such items are used, they should not contain edges that sharp or pointy.	Tactile review of all components for sharp or pointy edges.  Review multiple pieces to ensure consistency. Ensure materials used are durable over the lifetime of the garment.	"Panel Review": Seek feedback from peers.	Minimise use of such items. Seek alternative to avoid risks entirely.	Minimise use of such items. Seek alternative to avoid risks entirely.	Minimise use of such items.
<b><u>Chemical Toxicity</u></b>	Materials used for novelty trims and features may contain chemicals known to cause irritation.	Chemicals known to cause skin irritations or sensitivities should not be used for any component in the manufacture of children's apparel. Avoid chemicals: <ul style="list-style-type: none"> <li>▪ as listed in AS/NZ ISO 8124.3 Migration of certain elements</li> <li>▪ as listed/recognised by other reputable bodies (refer to "<a href="#">Hazards: Chemical Toxicity</a>")</li> </ul>	Consult supplier to confirm that no components contain chemicals known to cause skin irritations or health problems.  Find alternate source of materials, coatings etc. when verification cannot be obtained.	Test as per AS/NZ ISO 8124.3 Standard  &/or  Refer to <a href="#">Hazard - Chemical Toxicity</a> section for further info.	Optional after preliminary assessment when there is a cause for concern	Optional after preliminary assessment when there is a cause for concern	Optional after preliminary assessment when there is a cause for concern

### 2.10: Packaging

**GUIDELINES FOR USE:** Use this worksheet to facilitate a risk assessment for products containing buttons:

1. Consider the recommendations contained within the “Design Considerations” text box.
2. Assess each of the potential hazards by first understanding the “Functional Requirements”, then conducting the “Preliminary Assessment” (as required).
3. Proceed to “Further Testing” where the “Preliminary Assessment” is inconclusive or to obtain independent safety and performance evaluations

#### SCOPE:

This section provides recommendations on how to risk assess the packaging, labelling and methods of securing swing tags, button bags and other accessories to products.

Traditional risk assessments focus on the safety of the product itself.

The packaging, labelling and methods of securing swing tags, button-bags and other accessories to products can ALSO introduce hazards. However, these hazards may not fall within the scope of the traditional risk assessment of the product and could therefore be inadvertently overlooked.

Packaging within the scope of this section does not include in-transit packaging that is discarded prior to purchase.

#### DESIGN CONSIDERATIONS:

The following is recommended:

- At no time should plastic bags have a drawstring or cord that constricts/closes the end of a bag
- Use non recycled materials for plastic bags to avoid chemical contamination.
- Novelty packaging (i.e. ‘gift with purchase ‘ that looks and functions like a toy) needs to meet relevant standards

## Children's Apparel & Accessories – Part 2: Risk Assessment Worksheets

### 2.10: Packaging

Functional Requirements			Assessment and Testing Requirements				
Hazards	Risks	Safety Requirements	Preliminary Assessment	Further Testing / Assessment			
			Conduct "Further Testing"	2 <sup>nd</sup> Level Assessment	Ages <3	Ages ≥3 and ≤ 7	Ages >7 and ≤14
<b><u>Choking &amp; Ingestion</u></b>	Twist-ties, staples etc. may be used to attach components, accessories or packaging to each other.	Where appropriate, there should be adequate warnings about the potential hazard and advice regarding safe disposal.	Inspect/examine: Identify the presence of any packaging related componentry that could become a potential choking hazard.	Identify small part hazards as per: AS/NZS ISO 8124.1	Minimise use of such items. If present: Consider the merits of providing safety warnings & disposal advice.	If present: Consider the merits of providing safety warnings & disposal advice.	If present: Consider the merits of providing safety warnings & disposal advice.
	Plastic bags used for packaging can present a suffocation risk for children if placed over their heads.	Use "thick" bags that: 1) Are too small to fit over heads, &/or 2) Have holes or perforations that allow air flow &/or 3) Contain warnings that the bag is not a toy	Inspect/Examine against the safety requirement criteria	1) Thickness as per: AS/NZS ISO 8124.1  2) "Panel Review": Seek feedback from peers.	1) Plastic thickness > 38 microns and  2) Meets criteria for one or more of opening size, air holes and warning	1) Plastic thickness > 38 microns and  2) Meets criteria for one or more of opening size, air holes and warning	Meets criteria for one or more of opening size, air holes and warning
<b><u>Sharp Edges &amp; Points</u></b>	Packaging may use staples, twist ties or components that could contain sharp/pointy edges that can cause scratch or laceration injuries	No items should contain sharp or pointy edges.	Tactile review of all packaging components for sharp or pointy edges. Review multiple pieces to ensure consistency.	"Panel Review": Seek feedback from peers.	Minimise use of such items. Seek alternative to avoid risks entirely.	Minimise use of such items. Seek alternative to avoid risks entirely.	Minimise use of such items.

## Children's Apparel & Accessories – Part 2: Risk Assessment Worksheets

### 2.10: Packaging

<i>Functional Requirements</i>			<i>Assessment and Testing Requirements</i>				
Hazards	Risks	Safety Requirements	Preliminary Assessment Conduct "Further Testing" if risks are identified →	Further Testing / Assessment			
				2 <sup>nd</sup> Level Assessment	Ages <3	Ages ≥3 and ≤ 7	Ages >7 and ≤14
<b><u>Chemical Toxicity</u></b>	Materials used for packaging, and prints used on packaging, may contain chemicals known to cause irritation.	Volatile chemicals may pass from package to product. Chemicals known to cause skin irritations or sensitivities should not be used for packaging (boxes, bags) or printing onto packaging.	<p>Review/assess declarations from factories.</p> <p>Consult supplier to confirm with declarations that the materials contain no chemicals known to cause skin irritations or health problems</p> <p>Find alternate source of materials when verification cannot be obtained</p>	Test as per AS/NZ ISO 8124.3 Standard  &/or  Refer to <i>Hazard - Chemical Toxicity</i> section for further info.	Avoid use at all times.	Avoid use at all times.	Avoid use at all times.
<b><u>Strangulation &amp; Entrapment</u></b>	Long strings or ties could wrap around neck, fingers etc. and cause strangulation or ligature constriction (ischaemic) risks.	Avoid the use of long strings or ties. Provide adequate warnings about the hazard and advice regarding safe disposal.	<p>Inspect/examine: Identify the presence of any long strings or ties that could create a hazard in the hands of a child.</p>	"Panel Review": Seek feedback from peers.	Minimise use of such items. If present: Provide safety warnings & disposal advice	If present: Length to be kept to a minimum. Provide safety warnings & disposal advice	If present: Provide safety warnings & disposal advice

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## Children's Apparel & Accessories – Part 2: Risk Assessment Worksheets

### 2.11: Pom Poms, Tassels, Fringing, Braids & Plaits

**GUIDELINES FOR USE:** Use this worksheet to facilitate a risk assessment for products containing buttons:

1. Consider the recommendations contained within the “Design Considerations” text box.
2. Assess each of the potential hazards by first understanding the “Functional Requirements”, then conducting the “Preliminary Assessment” (as required).
3. Proceed to “Further Testing” where the “Preliminary Assessment” is inconclusive or to obtain independent safety and performance evaluations

#### **SCOPE:**

This section provides recommendations for the design and manufacture of children's clothing in relation to the use of Pom Poms, Tassels, Fringing, Braids and Plaits to promote safety and minimise risks.

Pom Poms, Tassels, Fringing, Braids and Plaits, though commonly used for all forms of apparel, have the potential to create safety hazards: Especially for small children.

Those that are poorly attached to garments or that easily break or separate can become a “small part” that is easily mouthed and swallowed by young children.

#### **DESIGN CONSIDERATIONS:**

The following is recommended:

- Pom Poms, Tassels, Fringing, Braids and Plaits should remain attached under the allocated care instruction and throughout the life of the product.
- Machine stitching is recommended. Lock stitching is the recommended form of attachment.
- Hand stitched pom poms, tassels, fringing, braids or plaits should be backstitched and secured thoroughly with stitching knotted-off adequately to avoid detachment.
- To maximise the strength of attachment when hand stitching it is recommended that multiple threads are not passed through the eye of the needle.
- Long loops & threads on internal or external area of product should be trimmed off.

## Children's Apparel & Accessories – Part 2: Risk Assessment Worksheets

### 2.11: Pom Poms, Tassels, Fringing, Braids & Plaits

Functional Requirements			Assessment and Testing Requirements				
Hazards	Risks	Safety Requirements	Preliminary Assessment Conduct "Further Testing" if risks are identified →	Further Testing / Assessment			
				2 <sup>nd</sup> Level Assessment	Ages <3	Ages ≥3 and ≤ 7	Ages >7 and ≤14
<b><u>Choking &amp; Ingestion</u></b>	Pom-poms and Tassels become detached by: <ul style="list-style-type: none"> <li>▪ Pulling</li> <li>▪ Sucking</li> <li>▪ Unravelling</li> </ul>	Pom-poms and tassels must be securely attached.	Pull & twist on trim to assess ease with which it detaches	Test as per AS/NZS ISO 8124.1 70 N pull test	Required	Required	Recommended
	Glued Trims become detached due to delamination or glue failure	Glue Trims must remain securely attached.	Pull & twist on trim to assess ease with which it detaches  Glue trims are not recommended for age < 3.	Test as per AS/NZS ISO 8124.1 70 N pull test	Required.	Required	Recommended
	Pom-poms, Tassels, Braids or plaits unravel and detach due to poor construction	All trims must be securely constructed and stitched down so that the yarns do not unravel	Assess the trim to ensure yarns are not easily unravelled. Recommend alternative constructions if yarns easily unravel	"Panel Review": Seek feedback from peers.	Required	Required	Required
<b><u>Strangulation &amp; Entrapment</u></b>	Long strings/lengths that attach pom-poms create risks of being: <ul style="list-style-type: none"> <li>▪ Caught</li> <li>▪ Pulled off/out</li> <li>▪ Entangled</li> <li>▪ Unravelling</li> </ul>	When a Pom-pom, plait or tassel is used in conjunction with a functional or decorative cord they should be considered with reference to the guidelines on draw cords, decorative ties & functional ties as set out within this document.	Assess the trim to determine if it forms part of a drawcord, decorative ties or adjusting tie. If yes, refer to the relevant section within this document.	"Panel Review": Seek feedback from peers.	Required	Required	Required

## Children's Apparel & Accessories – Part 2: Risk Assessment Worksheets

### 2.12: Sequins

**GUIDELINES FOR USE:** Use this worksheet to facilitate a risk assessment for products containing buttons:

1. Consider the recommendations contained within the “Design Considerations” text box.
2. Assess each of the potential hazards by first understanding the “Functional Requirements”, then conducting the “Preliminary Assessment” (as required).
3. Proceed to “Further Testing” where the “Preliminary Assessment” is inconclusive or to obtain independent safety and performance evaluations

#### SCOPE:

This section provides recommendations for the design and manufacture of children's clothing in relation to the use of sequins to promote safety and minimise risks.

Sequin trims, though commonly used for all forms of apparel, have the potential to create safety hazards: Especially for small children.

Sequin trims that are poorly attached to garments or that easily break can become a “small part” that is easily mouthed and swallowed by young children.

Sharp or pointy edges that can scratch or pierce a child's skin can arise through poor quality or badly attached sequins.

Coatings and materials used for sequins may contain chemicals that are hazardous for children who are known to frequently mouth such items.

#### DESIGN CONSIDERATIONS:

The following is recommended:

- Sequin trims should remain attached under the allocated care instruction, and throughout the life of the product
- Machine stitching is preferred. Lock stitching is the recommended form of attachment
- Hand stitched Sequins should be back-stitched and secured thoroughly with stitching knotted off adequately to avoid detachment.
- Long loops and threads on internal or external areas of product should be trimmed off.
- A suitable backing material may be required to conceal long float threads, knots or stitching and to fully secure the sequin from detaching. For example, backing fabrics may be required for reinforcement in instances where the base fabric is light weight.
- Backing fabric or fusing must be secure to ensure that they are not removed easily.
- Sequins used in conjunction with ties or cords should be considered with reference to the guidelines on [Drawstring, Functional Cords & Decorative ties](#) as set out within this document.
- Consideration should be given to the positioning of sequins that pass across the face when a garment is removed.
- Consideration should be given to the positioning of sequins at armhole, leg and neck openings for comfort & movement
- Glued sequins, please refer to the Diamantes, Glued and heat sealed decorations feature section.

## Children's Apparel & Accessories – Part 2: Risk Assessment Worksheets

### 2.12: Sequins

Functional Requirements			Assessment and Testing Requirements					
Hazards	Risks	Safety Requirements	Preliminary Assessment Conduct "Further Testing" if risks are identified →	Further Testing / Assessment				
				2 <sup>nd</sup> Level Assessment	Ages <3	Ages ≥3 and ≤ 7	Ages >7 and ≤14	
<b><u>Sharp Edges &amp; Points</u></b>	Sequins may crack, break or have burrs	Sequins must not create sharp or pointy edges if they crack or break during use.  Sequin edges should not have burrs or sharp edges	→	Tactile review for sharp, pointy edges & burrs	"Panel Review": Seek feedback from peers.	Required	Required	Required
	Sequins that are shaped intentionally by design or manufactured with sharp or pointy edges	No part of a sequin should have a sharp or pointy edge.	→	Tactile review for sharp or pointy edges	"Panel Review": Seek feedback from peers.	Required	Required	Recommended
	Materials used for sequins or the manner with which sequins are attached can be rough, abrasive & uncomfortable to the skin.	No part of a sequin should be rough, abrasive & uncomfortable to the skin.,	→	Tactile review for rough and abrasive surfaces: Especially for surfaces that sit in contact with the skin	"Panel Review": Seek feedback from peers.	Required	Recommended	Recommended
<b><u>Choking &amp; Ingestion</u></b>	Sequins may become detached by: <ul style="list-style-type: none"> <li>▪ Pulling</li> <li>▪ Sucking</li> <li>▪ Unravelling</li> </ul>	Sequins must be securely attached.	→	Pull & twist on sequin to assess ease with which it detaches	Test as per AS/NZS ISO 8124.1 70 N pull test	Required	Required for age groups up to 5 years.  Optional for 6 plus.	Optional

## Children's Apparel & Accessories – Part 2: Risk Assessment Worksheets

### 2.12: Sequins

Functional Requirements			Assessment and Testing Requirements				
Hazards	Risks	Safety Requirements	Preliminary Assessment Conduct "Further Testing" if risks are identified →	Further Testing / Assessment			
				2 <sup>nd</sup> Level Assessment	Ages <3	Ages ≥3 and ≤ 7	Ages >7 and ≤14
<b><u>Chemical Toxicity</u></b>	<p>Sequins can be made from materials or coatings that contain chemicals that are hazardous when in oral contact</p> <p>Materials used may also cause irritations when in contact with the skin</p>	<p>Sequins should not contain should not contain any of the known irritants:</p> <ul style="list-style-type: none"> <li>▪ as listed in AS/NZ ISO 8124.3 Migration of certain elements</li> <li>▪ as listed/recognised as health risks by other reputable bodies (refer to "<i>Hazards: Chemical Toxicity</i>")</li> </ul>	<p>Consult supplier to confirm that no coatings or materials contain chemicals known to cause skin irritations or health problems.</p> <p>Find alternate source of materials, coatings etc. when verification cannot be obtained.</p>	<p>Test as per AS/NZ ISO 8124.3 Standard</p> <p>&amp;/or</p> <p>Refer to <i>Hazards: Chemical Toxicity</i> section for further info.</p>	<p>Optional after preliminary assessment when there is cause for concern.</p>	<p>Optional after preliminary assessment when there is cause for concern.</p>	<p>Optional after preliminary assessment when there is cause for concern.</p>

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### 2.13: Zips, Slide Fasteners & Pullers

**GUIDELINES FOR USE:** Use this worksheet to facilitate a risk assessment for products containing buttons:

1. Consider the recommendations contained within the “Design Considerations” text box.
2. Assess each of the potential hazards by first understanding the “Functional Requirements”, then conducting the “Preliminary Assessment” (as required).
3. Proceed to “Further Testing” where the “Preliminary Assessment” is inconclusive or to obtain independent safety and performance evaluations

#### SCOPE:

Slide fasteners, though commonly used for all forms of apparel, have the potential to create safety hazards: Especially for young children.

Poor quality components of zippers can easily break or become, a detached “small part” that is easily mouthed and swallowed by young children.

Sharp or pointy edges can scratch or pierce a child's skin can arise through poor quality componentry or poor design choice.

Coatings and materials used for slide fasteners may contain chemicals that are hazardous for children who are known to frequently mouth such items.

#### DESIGN CONSIDERATIONS:

The following is recommended:

- Slide fasteners/Pullers should remain attached under the allocated care instruction, and throughout the life of the product.
- Avoid using zip pullers that resemble food for children under the age of 3 years.
- Where zippers come in contact with the skin, a zipper guard or facing is recommended.
- It is recommended that the zip puller is attached to the slider so that it cannot be pulled free by using a twisting or straight force.
- It is preferred that the zip pullers are constructed as part of the main body of the zip slider.
- Zip pullers made from rubber or other natural material such as wood are not recommended because they can crack and break easily.
- Ensure channel stoppers are fully effective in preventing the zip slider from detaching and becoming a small part.
- Metal top stoppers on slide fasteners must be firmly clamped.
- Top and bottom stops should prevent zipper slider/zipper head from detachment

## Children's Apparel & Accessories – Part 2: Risk Assessment Worksheets

### 2.13: Zips, Slide Fasteners & Pullers

Functional Requirements			Assessment and Testing Requirements				
Hazards	Risks	Safety Requirements	Preliminary Assessment Conduct "Further Testing" if risks are identified →	Further Testing / Assessment			
				2 <sup>nd</sup> Level Assessment	Ages <3	Ages ≥3 and ≤ 7	Ages >7 and ≤14
<b><u>Choking &amp; Ingestion</u></b>	Sliders component may come apart by: <ul style="list-style-type: none"> <li>• Pulling</li> <li>• Twisting</li> <li>• Sucking</li> <li>• Poor weak quality</li> </ul>	Sliders must be securely attached and must not detach from the zipper.  AS 2332 Slide Fasteners	Pull & twist on puller and/or slider to assess ease with which it detaches	Test as per AS/NZ ISO 8124.1 70 N pull test.  Test as per AS 2432 bite test	Required	Recommended	Optional
<b><u>Sharp Edges &amp; Points</u></b>	Sliders /pullers can crack or break resulting in laceration to the skin. Stoppers may have sharp burrs caused by faults in the mould.	Must have smooth and rounded edges to reduce the risk of scratching.	Tactile review for sharp or pointy edges and burrs	"Panel Review": Seek feedback from peers.	Required	Required	Recommended
<b><u>Chemical Toxicity</u></b>	Slide fasteners /pullers materials or coatings may contain chemicals known to cause skin irritation or health problems	Slide fasteners/pullers should not contain any of the known irritants: <ul style="list-style-type: none"> <li>▪ as listed in AS/NZ ISO 8124.3 Migration of certain elements</li> <li>▪ as listed/recognised by other reputable bodies (refer to "Hazards: Chemical Toxicity")</li> </ul>	Consult supplier to confirm that no coatings or materials contain chemicals known to cause skin irritations or health problems  Find alternate source of materials when verification cannot be obtained.	Test as per AS/NZ ISO 8124.3 Standard  &/or  Refer Toxicity section for further info.	Optional after preliminary assessment when there is a cause for concern	Optional after preliminary assessment when there is a cause for concern	Optional after preliminary assessment when there is a cause for concern

## **Appendix A: Definitions**

# Children's Apparel & Accessories

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The following definitions should be used within the context of safety assessment for children's apparel and accessories.

## **Accredited laboratory**

*A laboratory that has been assessed and accredited by an independent accreditation body such as NATA in Australia or HOKLAS in Hong Kong.*

## **Accessory**

*An item which is used to supplement, decorate or contribute to the wearer's main outfit (e.g. headwear, scarf, gloves, brooch)*

## **Aglet**

*Small plastic capping used to secure the ends of small cords to prevent fraying (e.g. as used for shoe laces)*

## **Apparel**

*Items of clothing that are worn to protect, wrap, or beautify the body.*

## **Applique**

*A decoration made by cutting pieces of one material and applying them to the surface of another.*

## **Backing material**

- 1) *A substrate (typically paper) used with embroidery to provide structural stability for fabrics during the embroidery process.*
- 2) *Small pieces of material used to reinforce attachment of trims to prevent them pulling through or damaging the main fabric.*

## **Badge**

*A patch made from different types of material that is either a) permanently attached with adhesive or stitching or b) is detachable (e.g. a badge with a pin).*

## **Beads**

*A small, often round piece of material, such as glass, plastic, or wood, that is pierced for grouping, stringing, threading and attachment.*

## **Braid**

*A decorative band created from interlacing strips or strands of textile material.*

## **Channel Stopper**

*A device attached to the top or bottom of a zip to prevent the zip puller from detaching when pulled to the upper/lower limits.*

## **Chemical Toxicity**

*An adverse reaction to residual chemicals that may be toxic.*

## **Conformance**

*A supplier's ability to meet and demonstrate conformance to the applicable requirements and test procedures.*

## **Choking Hazard**

*The mechanical obstruction of the flow of air to the lungs.*

# Children's Apparel & Accessories

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## **Decorative Tie**

A non-functional or decorative cord, ribbon or tie of fixed length which is not intended to be used to adjust the size of a garment opening or to fasten the garment itself.

## **Diamante**

A small, glittering ornament, such as a rhinestone or a sequin, applied to (usually adhered to) fabric or a garment.

## **Draw cord / Drawstring**

A cord or ribbon running through a channel or loop to adjust the size of the opening or to fasten a garment.

## **Embroidery**

Ornamental designs created on fabric surfaces using hand or machine needlework and stitching

## **Entrapment**

A situation where a garment, part of a garment or component of an accessory is unexpectedly caught, trapped or snagged.

## **Free-end**

An attached fabric/textile trim with an unsecured end that is able to sit or hang loosely from its point of attachment.

## **Functional cord**

See drawcord

## **Functional Tie**

A cord or ribbon of fixed length that is used to adjust the size of the opening or to fasten a garment.

## **Fusing**

A layer of fabric which is adhered by heat and pressure to the reverse side of a fabric, typically to provide stability and shape to the main fabric. Refer Backing Material.

## **Hanger loops**

Fabric strips or ribbons sewn to garments near the shoulder, neck or waist area that is looped onto hangers to prevent garments from falling off when hung.

## **Harm**

Physical injury or damage to the health of the wearer.

## **Hazard**

Potential source of harm to the wearer of the garment.

## **Hook & Loop**

A fastening system consisting of two pile-fabric tapes which are sealed by pressing the pile sides of the two tapes together. Velcro is a brand name of such a system.

## **Horizontal standards approach**

The use of safety and performance standards created for specific product types to conduct a product risk assessment on an unrelated product (e.g. the application of AS/NZS ISO 8124.1 toy standard to identify a small part on a fashion accessory).

## **Independent laboratory**

An independent laboratory is one that has no ownership or affiliation with the companies for which testing services are provided.

## **Informative reference**

A reference document cited in the guidelines that provides instructions and information for guidance.

# Children's Apparel & Accessories

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## **Ingestion**

*Taking something in by swallowing.*

## **Injury**

*Damage to the body caused by (acute) exchanges with environmental energy that are beyond the body's resilience.*

## **Insertion**

*The placing of a small object into the nose, ear or mouth.*

## **Interlining**

*Refer Fusing.*

## **Laceration**

*A cut, scratch or graze.*

## **Normative reference**

*A reference document cited in the guidelines that is a necessary and integral element for application of the guidelines.*

## **Panel review**

*A process by which risk assessment decisions are referred to a panel or group of engaged stakeholders to arrive at a decision relating to product safety.*

## **Press Fastener**

*A fastening device that consists of a male component and a female component, attached to different parts of a garment. The garment is fastened when the two components are aligned and pressed together. These devices can be attached to a garment mechanically or can be sewn on. They include studs and snaps.*

## **Quick release**

*A component or device used on drawcords and drawstrings that has been designed to release rapidly when light force is applied (e.g. as commonly used for lanyards).*

## **Risk**

*A combination of the probability of occurrence of a hazard and the severity of the harm, which that hazard could be expected to cause.*

## **Risk assessment**

*The overall process of risk identification, risk analysis and risk evaluation utilised to achieve "tolerable risk", taking into consideration design, materials, components and construction. This is an iterative process requiring repeated application until a tolerable level of risk is achieved.*

## **Rivets**

*Small metallic trim, which is comprised of two parts, one part is attached to the outer side of the garment by a tack which passes through the fabric from the reverse side. This is typically used on the pockets of denim jeans.*

## **Safety**

*Safety is achieved by reducing risk to a tolerable level, referred to in this document as tolerable risk.*

## **Sash or Tied Belt**

*A wider decorative or functional tie that is not encased and is tied around the waist area of a garment.*

## **Sequin**

*A small shiny ornamental disk, often sewn onto fabrics as decoration*

# Children's Apparel & Accessories

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## **Slide fastener**

Refer Zip Slider

## **Snaps (Snap-fasteners)**

Refer to Press Fasteners

## **Studs**

Refer to Press Fasteners

## **Suffocation**

Stoppage of breathing or asphyxia.

## **Strangulation**

Injury caused by constriction of the throat that restricts breathing.

## **Supplier**

Designer, manufacturer or distributor of a product. (Consideration of anyone in the supply chain)

## **Tab**

A small flap or strip of material/fabric used to hold or fasten a part of a garment/accessory.

## **Tactile review**

A process of feeling, rubbing and pressing against components to assess whether there are any sharp or pointy edges that could cause irritation, aggravation or injury.

## **Toggle**

- 1) A short rod of wood or plastic sewn to one side of a coat or other garment, that is pushed through a hole or loop on the other side to join or close a garment.
- 2) An attachment to the end of a cord or tie intended to improve appearance of the cord end, to protect the cord end or to restrict cord ends from being pulled into a hem or casing.

## **Tolerable risk**

An acceptance that there are residual safety risks associated with a product's design or function that are approved given the utility/benefits provided.

## **Touch and Close Fastener**

Refer to Hook and Loop

## **Velcro**

A registered trademark for a hook and loop fastener system. Refer to **Hook & Loop**

## **Vertical Standard**

A Standard or Guideline specifically written for one range or product type.

## **Zip slider**

The device that moves up and down to open/close the zip.

## **Zip puller**

The tab that is held to move the zip slider up and down.