

**CONSULTATION PAPER**

**REVISION OF THE PRODUCT SAFETY STANDARDS FOR:**

**COTS FOR HOUSEHOLD USE**

**CHILDREN'S NIGHTWEAR AND LIMITED DAYWEAR**

**HAVING REDUCED FIRE HAZARD**

**CHILDREN'S TOYS (SMALL PARTS REQUIREMENTS FOR**

**CHILDREN UNDER THREE)**

**BABY WALKERS**

**September 2004**

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# Contents

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<b>INTRODUCTION .....</b>	<b>4</b>
<b>CONSULTATION .....</b>	<b>5</b>
Submissions .....	5
<b>COTS FOR HOUSEHOLD USE .....</b>	<b>6</b>
Background.....	6
Changes to the National Standard .....	6
Proposed Shape of the Regulation .....	8
<b>CHILDREN’S NIGHTWEAR .....</b>	<b>9</b>
Background.....	9
Changes to the National Standard .....	9
Coverage.....	9
Trims .....	10
Labelling.....	10
Clarifications.....	10
Proposed Shape of the Regulation .....	11
<b>CHILDREN’S TOYS (SMALL PARTS REQUIREMENTS) .....</b>	<b>12</b>
Background.....	12
Changes Between NZS 5822:1992 and AS/NZS ISO 8124.1:2003 Standards: .....	13
Clarity .....	13
Age groupings .....	13
Coverage.....	13
Proposed Shape of the Regulation .....	15
<b>BABY WALKERS.....</b>	<b>16</b>
Background.....	16
Difficulties with the Current Regulations .....	16
Proposed Shape of the Regulation .....	17
<b>REGULATORY OPTIONS.....</b>	<b>18</b>
Maintaining the Existing Regulations .....	18
Removing the Mandatory Product Safety Standards (self regulation).....	18
Revise the Regulations to Reflect the new National Standards (the preferred option) .....	18
Submissions Requested .....	19
<b>APPENDIX A: COMPARISON OF REQUIREMENTS UNDER AS/NZS ISO8124 PT 1 TO NZS5822 SUPPLIED BY RICHARD HAYMAN – MEMBER OF CS-018 (NOW CHAIR) .....</b>	<b>20</b>
<b>APPENDIX B: REWRITE TO REPLICATE PARTS OF CLAUSE 5 THAT WE PROPOSE TO ADOPT .....</b>	<b>27</b>

# Introduction

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1 It is proposed to revise the following product safety standards to take account of the revisions of the national standards on which they are based:

- *The Product Safety Standards (Cots for Household Use) Regulations 2000*, (reference document AS/NZS 2172);
- *The Product Safety Standards (Children's Nightwear and Limited Daywear Having Reduced Fire Hazard) Regulations 1999* (reference document AS/NZS 1249);
- *The Product Safety Standards (Children's Toys) Regulations 1992*, (reference document NZS 5822 now superseded by AS/NZS ISO 8124);
- *The Product Safety Standards (Baby Walkers) Regulations 2001*, (reference document ASTM F977)

Product safety standards are regulations made under the Fair Trading Act 1986. They declare a national standard or parts and variations thereof to be a product safety standard.

## Consultation

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2 Under section 29(3) of the Fair Trading Act 1986, the Minister of Consumer Affairs is required to consult with parties considered to be substantially affected by a proposed product safety standard, to provide an opportunity for those parties to make any comment and to consider such comment.

This paper forms the first step in that consultation process. It is intended to assist anyone who may wish to make a submission on the merits or otherwise of adopting the revised standards (and in the case of baby walkers including additional performance requirements).

The paper deals with each of the product safety standards in turn, identifying the significant changes to each standard and outlining the proposed shape of the revised regulation. It then discusses the options available for dealing with the safety issues arising from these products.

## Submissions

Final date for submissions: 26 November 2004

Comment and submissions should be addressed to:

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# Cots for Household Use

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## Background

3 The current mandatory standard declares AS/NZS 2172:1995 *Cots for household use - Safety requirements* to be a product safety standard. This standard specifies dimension and construction requirements that are designed to reduce the major injury hazards associated with cots, namely strangulation, entrapment and falls. AS/NZS 2172:1995 has been reviewed and a new edition issued.

The regulations were put in place to help reduce an unacceptably high incidence of injury associated with cot use in New Zealand. A number of these injuries could be directly attributed to hazardous design features and it was considered necessary to introduce regulatory measures both to ensure that only new designs that were safe could enter the market and also to protect consumers from older unsafe designs in the substantial second hand market for this product.

The revision includes changes to some dimension requirements, and to the performance requirements for access fastening devices. It clarifies the standard's intentions with regard to labelling and marking and makes explicit the relationship of the testing protocols to the general construction requirements.

## Changes to the National Standard

4 Goods currently covered by the mandatory standard (AS/NZS 2172:1995) will continue to be covered by the new standard AS/NZS 2172:2003. The changes to the standard are discussed below and comment is sought on these.

- **NEW DEFINITIONS**

New definitions for a 'child', a 'cot' and the phrase 'within the cot' have been added to clarify that the standard is concerned with the safety of the cot relative to the child who is the intended user of the cot. Where applicable the standard does take account of the likelihood of the presence of other siblings in the home environment and some foreseeable behaviour and builds requirements to accommodate this. Generally however the safety requirements are directed towards the intended user of the cot.

- **GENERAL CONSTRUCTION**

The general construction requirements have been amended to clarify that compliance with these requirements is met through compliance with the testing procedures called up by Clause 9 of the standard, and not subject to a different and non-specified testing regime.

- **GAPS**

The test for gaps between the mattress and the cot has been amended with the maximum measurement being reduced from 25 mm to 20 mm. The way in which the test can be carried out is different. The mattress can now be pushed up against one side or the end of the cot and the resultant gap must be a measure no greater than 40 mm, reducing the gap measurement by 10 mm. The intention is to test for the danger of a child smothering if its face becomes trapped between the mattress

and the side of the cot. This is in line with the original diagram included in AS/NZS 2172:1995.

A new dimension test has been included to avoid gaps greater than 30 mm which may allow limb entrapment.

- **FOOTHOLDS**  
The standard clarifies what is considered to be a foothold and that this is relevant only to what may be accessible to a child inside the cot. Foothold dimensions have been specified, with no components between 150 and 550 mm in height which could be used as footholds. This is to ensure the minimum depth of the cot is maintained thus preventing the child from falling out of the cot.
- **ACCESS FASTENING DEVICES**  
More design options have been included in the access fastening devices tests, but the design options are more stringent to ensure the locking devices cannot be inadvertently opened.
- **PROTRUSIONS AND SHARP EDGES**  
The specifications for protrusions in the 1995 edition was trying to address for two differing hazards, snagging of clothing and injury to the head. The sharp edges/sharp points specifications now specifically address sharp protrusions that could injure the child, for example, by bumping its head. The dome-nut dimension of less than 5 mm has been retained and a requirement that wooden edges be chamfered has been added.

The protrusion specifications now specifically address snagging type hazards to make sure that a child's clothing can not catch and thereby present a strangulation hazard. The dimension for a protrusion has been reduced from 8 mm to 5 mm unless the protrusion is so designed that cannot snag clothing.

- **ENTRAPMENT**  
The entrapment test of Appendix A has increased the force used from 50 N to 100 N, by the spherical test probes to ensure that a toddlers strength is considered.

The smaller gap tests which were included in the 'Holes and openings' clause of AS/NZS 2172:1995, are now included in the overall entrapment tests for clarification. The tests for the 12 mm and 5 mm probes now have a force of 10 N specified to test for smaller fingers trying to access smaller gaps.

- **STRENGTH**  
The strength test of Appendix C has increased the force used from 100±5 N to 125±5 N to ensure that the standard adequately addresses likely behaviour, such as the child shaking the cot.
- **TESTING SEQUENCE**  
The testing sequence has changed to include another entrapment test at the end to ensure that no entrapment hazards occur after robust usage. In the 1995 edition many of the tests included the entrapment hazard test to ensure an entrapment hazard did not appear, which is now simplified with the entrapment test being repeated at the end of the sequence of tests.

## Proposed Shape of the Regulation

5 The preferred option is to amend *The Product Safety Standards (Cots for Household Use) Regulations 2000*, and adopt the new edition of AS/NZS 2172:2003 *Cots for household use – Safety requirements*, with the same clauses omitted within the schedule of variations. It is further proposed that second-hand cots continue to have a reduced set of performance specifications imposed upon them.

It may be necessary to word a special variation to accommodate changes in regard to the mattress/cot gap measurement and the fastening device requirements and comment is sought on this.

# Children's Nightwear

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## Background

6 The mandatory standard was originally established in 1987 and then amended in 1999 to reduce the risk of serious injury and death to children as a result of accidents involving children's nightwear and fire through:

- excluding from the market children's nightwear that presents an unacceptable level of fire risk;
- requiring garment design restrictions where the fabric used, poses a high flammability risk; and
- ensuring appropriate marking and labelling of the fire hazard of children's nightwear to allow consumers to make informed choices.

The existing mandatory standard for children's nightwear references the joint Australian/New Zealand national standard AS/NZS 1249:1999 *Children's nightwear and limited daywear having reduced fire hazard* to be a product safety standard. This standard has been revised and is superseded by AS/NZS 1249:2003 *Children's nightwear and limited daywear having reduced fire hazard*.

AS/NZS 1249:1999 represented a major change in the nightwear standard through its introduction of a separate category of garment – the all-in-one. This brought into the coverage of the standard many garments which before could have been classified as either daywear or nightwear, and some garments made from knitted fabric which were more obviously daywear only. The revision, AS/NZS 1249:2003, has attempted to clarify this situation and to remove from the coverage of the standard those types of all-in-one garments which by their design, and the weight of fabric used, are unlikely to be worn as nightwear. Technical errors have also been addressed and where considered desirable some interpretations have been clarified.

## Changes to the National Standard

### Coverage

7 The definition of an all-in-one garment has been revised to exclude those garments that by their design features are clearly intended as daywear. For example, pinafores that are clearly dresses but which otherwise fall into the all-in-one category because the overdress is attached to an undergarment with leggings that are joined at the crotch.

The new definition provides that an all-in-one garment is subject to the requirements of the standard if it is:

- size 00 – 2, and;
- made predominantly from knitted fabric with a mass less than 280g/m<sup>2</sup> when determined in accordance with AS 2001.1.13, and;

- the surface area of the close fitting part of the garment is more than 80% of the total surface area of the garment.

Conversely, it is excluded from the coverage of the standard (i.e. it is presumed to be a daywear garment) if it is:

- size 00 – 2, and;
- made predominantly from knitted fabric with a mass greater than 280g/m<sup>2</sup> when determined in accordance with AS 2001.1.13, and;
- the surface area of the close fitting part of the garment is less than 20% of the total surface area of the garment.

NOTE: Garments made predominantly from knitted fabric size 3 -14, and all woven garments sized 00 - 14, are included in the standard depending on whether they are suitable for use as nightwear. This has not changed.

## **Trims**

8 With the definition now more closely targeting clothing that will be used as nightwear it is important that additional dangers are not introduced through the use of potentially hazardous trims. To this end, restrictions have been introduced regarding the use of trims with a pile or nap on all-in-one garments. The revision establishes that where a trim has a pile or nap, the trim must either meet the surface burn requirements for such fabric, or meet the restricted area requirements that are applied to all the other categories of garments in the standard.

## **Labelling**

9 A note has been included to indicate best practice for labelling where garments are sold as part of a set and not all garments are intended as nightwear. It is suggested that in such instances labelling be included, stating that 'Only the all-in-one garment has been assessed for fire hazard'.

## **Clarifications**

### *Treatment of Fabrics with a Pile or Nap*

10 The standard has been reworded to clarify the treatment of fabrics with a pile or nap. Where the pile or nap is on the outside the fabric must meet the surface burn requirements. Where the pile or nap is on the inside of the fabric, and where it does not meet the surface burn requirement, the garment must have fabric extending 2.5 cm to the inside (of sleeve edge and all openings below the waistline) that is either fabric without a pile or nap, or fabric which meets the surface burn requirements.

## Appendix A

11 Appendix A has been provided to rectify errors and clarify the steps in the assessment process.

### Labels

12 The reference to printed labels only has been removed. This will no longer restrict the use of woven labels.

### Other issues – second hand goods

13 In revising the regulations due to a revision of the reference standard it may also be timely to address the treatment of second hand goods under the regulations. Currently the regulations apply to the supply of children's nightwear regardless of whether they are new or second hand and regardless of whether or not they are supplied in trade or passed on between friends and family.

The application of the standard to transactions between family and friends, whether or not money changes hands, is clearly unenforceable and it is proposed that such transactions be exempted from the regulation.

How second hand nightwear sold in trade should be treated is less clear. The reality is that many parents will cut off the labels and that if these garments are later offered for sale through a second hand retail outlet they will not comply. It could be argued that the standard itself imposes fabric and design specifications that ensure that the garment is safe before it enters the market and therefore that the presence of a label at some later secondary sale is not critical. On the other hand consumer awareness of the fire hazards attached to clothing is not good and it can be argued that there is a continued need to place this information before the consumer.

The technical committee which is responsible for developing the standard does not differentiate between new and second hand product and therefore no consensus has been reached on how this matter should be dealt with. Comment is therefore sought from all interested parties so that such a consensus can be reached.

## Proposed Shape of the Regulation

14 The preferred option is to amend *The Product Safety Standards (Children's Nightwear and Limited Daywear Having Reduced Fire Hazard) Regulations 1999*, and adopt the new national standard AS/NZS 1249:2003 as the mandatory product safety standard for children's nightwear, subject to the current minor variation to facilitate compliance testing of small garments.

AS/NZS 1249:2003 calls on ISO 6941 *Textile fabrics -- Burning behaviour -- Measurement of flame spread properties of vertically oriented specimens* which is used to test fabrics prior to their being made up into garments. However test samples are not always freely available and compliance testing is facilitated by an expedient test, which requires less sample material. This minor variation already exists in the current mandatory standard and it is proposed that this continue.

# Children's Toys (small parts requirements)

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## Background

15 The mandatory standard for children's toys was originally established to address the hazard of small parts to children under the age of three years. Children under three years of age are still at the stage of exploring their world by putting things in their mouth. However they do not yet have a fully developed cough reflex and are therefore especially vulnerable to inhalation and ingestion hazards from small toys or from toys that produce small parts when they break. The objective of the regulations was to reduce the risk to children less than three years of age choking on toys, by ensuring that the toys meet small parts size and performance criteria.

The current regulations declare NZS 5822:1992 *The Prevention of Ingestion and Inhalation Hazards in Toys Intended for Use by Children Under Three Years of Age* to be a product safety standard. NZS 5822 is derived from the larger national standard NZS 5820:1982 *Specification for the safety of toys* which sets out the general safety requirements for toys for children up to the age of fourteen years.

NZS 5822 outlines the small parts requirements for toys for children under the age of 3 years. It sets out tests, such as a bite test and drop test, to ensure that such toys can be used by their intended user, without small parts breaking off.

The existing national standard NZS 5820:1982 *Specification for the safety of toys* has now been superseded by AS/NZS ISO 8124 *Safety of toys* series. With regard to the small parts requirements that are subject to regulation under the Fair Trading Act 1986 the relevant part of AS/NZS ISO 8124 is *Part 1: Safety aspects related to mechanical and physical properties*.

AS/NZS ISO 8124 is the adoption by New Zealand and Australia of the International Standard ISO 8124 *Safety of toys*. ISO 8124 represents an international initiative to establish a global standard for toys which has been in existence since 2000 and was adopted by New Zealand and Australia in 2002. It is an attempt to bring all the national standards together into one document, so that the global market has one set of rules that are acceptable to all. The bulk of the international standard is a combination of the European Standard EN 71 and the American Standard ASTM F963. New Zealand is a member country of the international committee which has participated in the development of the international standard ISO 8124 and has the ability to participate in future reviews.

## **Changes Between NZS 5822:1992 and AS/NZS ISO 8124.1:2003 Standards:**

16 The major changes between NZS 5822 and AS/NZS ISO 8124 fall into three categories:

- Clarity and accessibility
- Age groupings – under 18 months and 18-36 months
- Coverage

### **Clarity**

17 AS/NZS ISO 8124 establishes a hazard based identification of potential injury risk to children rather than a prescriptive list of different types of toys. This will ensure that all new products are adequately dealt with and that products that pose risks to children are not excluded from the standard on the technicality that they do not appear specifically on a prescribed list. This approach is considered to give more flexibility to designers and manufacturers. It also brings the test regime in line with best international practice.

The language has also been simplified. For example 'Ingestion and inhalation hazard' has been simplified to 'small part cylinder'. These changes reflect the now international nature of the standard and should make it more accessible to all interests.

### **Age groupings**

18 AS/NZS ISO 8124 has introduced more stringent requirements for the age group up to 18 months and some lessening in the requirements for toys suitable for the 18 months to 36 months age group. The under 18 month age group is considered at most risk of injury and tests such as the drop, compression, projectile, seam strength, flexure, and tension for tyre removal tests, have all become more stringent. Specific details on the tests are outlined in Appendix A. Tests for toys intended for the 18-month up to and including 36-month age group have become less stringent but it is expected that the impact will be slight. (See also Appendix A)

### **Coverage**

19 In the main it is expected that goods currently covered by the mandatory standard (NZS 5822) will continue to be covered by the new standard AS/NZS ISO 8124 Part 1. There are however some areas where coverage may alter and comment is sought on these issues.

- **SMALL BALLS**  
In NZS 5822 small balls were not specifically noted. If they were intended for a child under three they were required to meet the small parts requirements of the standard. AS/NZS ISO 8124 specifically identifies small balls as a toy category and establishes a new test for the size and shape of small balls that are shown to be a choking, suffocation and inhalation hazard. The standard clarifies that small balls

are not an appropriate toy for children up to and including 36 months. Essentially the regime governing small balls will be the same.

- **EXPANDING TOYS**  
In NZS 5822 expanding toys were not specifically noted. However where the toy was clearly intended for an under three, such as the bath capsules that dissolve and unfurl into various shapes, it was considered that these would need to pass the small parts test both as capsules and when they were unfurled. AS/NZS ISO 8124 deals with expanding toys for all age groups. It is implicit that expanding toys intended for the under three's must meet the small parts requirements and explicit that expanding toys for older children (which do not meet the small parts specification) are limited in the extent to which they may expand. This latter requirement is not relevant to toys intended for the under three age group (they must already be of a size which cannot be swallowed) and it is proposed that it be deleted from the mandatory standard. This follows the approach taken by Australia in its mandatory standard and in effect maintains the current situation.
- **POMPOMS AND PRE-SCHOOL PLAY FIGURES**  
There has been debate in the past as to whether pompoms are included in NZS 5822. These products have been highlighted as a choking, suffocation and inhalation hazard and AS/NZS ISO 8124 makes it quite clear that pompoms and pre-school play figures must meet the small parts requirements for children up to and including 36 months.
- **DUMMIES AND PACIFIERS**  
Dummies/pacifiers are currently included in the scope of NZS 5822. This relates to their small parts dimensions only. A separate standard AS 2432-1991 *Babies' dummies* also addresses the ventilation hole requirements. The issue facing interested parties now is whether babies dummies should continue to be included in the mandatory toy standard, or whether a separate mandatory standard, possibly based on AS 2432-1991 *Babies' dummies*, could be developed for dummies and pacifiers, which addresses all the specific performance attributes for these products.
- **FOAM PRODUCTS**  
The Australian mandatory toy standard (regulations) specifically excludes certain foam products if they are labelled "NOT SUITABLE FOR CHILDREN UNDER 3 YEARS AS FOAM PIECES MAY BREAK OFF AND CAUSE A CHOKING HAZARD". NZS 5822 does not make this distinction and neither does the joint national standard AS/NZS ISO 8124. It is proposed that NZ continue to make no special exemption for these products. Should a small piece break off or be bitten off, that fragment poses an unacceptable choking or ingestion hazard regardless of the material of which it is made. This position is consistent with the international standard.
- **SECOND HAND TOYS**  
Currently the mandatory standard applies to all new toys and to second-hand toys that are sold in trade. Private sales of second-hand toys are exempted. It is proposed that this regime continue.

## Proposed Shape of the Regulation

20 The preferred option is to amend *The Product Safety Standards (Children's Toys) Regulations 1992*, and adopt the new national standard AS/NZS ISO 8124 as the mandatory product safety standard for toys, small parts requirements for children under three.

When toys for the under three age group were first regulated Standards New Zealand was charged with the development of NZS 5822. This standard incorporated the small parts test requirements of the parent standard NZS 5820. This meant that NZS 5822 could be cited in its entirety as a stand-alone document.

If the preferred option, adopting those parts of AS/NZS ISO 8124 that relate to small parts, proceeds, it is proposed that Part 1 of AS/NZS ISO 8124 be declared a product safety standard, with the inclusion of the appropriate variations or deletions as required and signalled in the body of this paper. The structure of ISO 8124 with its clear and concise parts makes the creation of a stand-alone sub-standard like NZS 5822 unnecessary.

This approach will align with Australia's mandatory standard with the exception of the treatment of foam products, as discussed earlier.

# Baby Walkers

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## Background

21 The product safety standard for baby walkers was originally established to address the high incidences of injury associated with the product, particularly those relating to stability and stair tumbling.

The current regulations declare the anti-tipping (clause 7.3), step tumbling (clause 7.6), and the labelling requirements (clause 9), of ASTM F977-00 *Standard Consumer Safety Specification for Infant Walkers* to be a product safety standard to ensure the stability of the walker.

The existing national standard ASTM F977-00 *Standard Consumer Safety Specification for Infant Walkers* has now been superseded by ASTM F977-03 *Standard Consumer Safety Specification for Infant Walkers*. There are no significant technical changes between ASTM F977-00 and ASTM F977-03, they are related to terminology, editorial and formatting only.

## Difficulties with the Current Regulations

22 A recent investigation carried out by the Commerce Commission highlighted some difficulties of enforcement with the current regulations. The regulations:

- do not contain general construction requirements, which would enable the Commission to act to remove inferior and potentially unsafe product from the market;
- require a specific infant dummy be used for the anti-tipping and step tumbling tests. Extensive enquiries by the Commerce Commission with testing facilities and enforcement agencies have revealed that the infant dummy is not available in either New Zealand or Australia. Consequently the baby walkers can not currently be tested to the stability tests in either New Zealand or Australia.

The investigation carried out by the Commerce Commission was in respect of a baby walker manufactured in China. The walker had not previously been tested as to compliance with the product safety standard or any other standard. The persons who imported and sold the walkers were not aware the product safety standard was in place.

A testing laboratory was commissioned to test the structural strength and integrity of one of the walkers. The walker frame cracked and bent and would have failed the requirements of the general construction clauses of the American standard had they been included in the product safety standard. However the Commerce Commission could rely only on the non-compliance with labelling instructions to succeed in having this walker withdrawn from the market.

Prosecution for non-compliance with labelling requirements is unlikely to attract the penalties that would signify the seriousness of supplying an unsafe product to the market. Of more concern is the possible situation of a walker being non-compliant with the stability and stair tumbling requirements, and otherwise unsafe, but compliant with the labelling requirements. In such circumstances the Commission currently considers itself unable to act at all.

The above scenario does not appear to be an isolated incident. Recently New Zealand Customs officers checking the contents of a container landed at Tauranga noted that the walkers appeared to be non-compliant. Consultation with the Commerce Commission suggests that these products are certainly similar, if not identical to the earlier model.

The reappearance of inferior quality baby walkers on the New Zealand market is of concern. In developing the product safety standard in 1999 the Ministry took account of industry commitment to the trends developing in the United States market. Baby walkers imported into New Zealand were generally robust and incorporated new safety features such as:

- eight wheels instead of six, improving the stability;
- stoppers, in the form of push down or screw down levers on the base to enable the caregiver to immobilise the walker;
- wider base to ensure a walker could not pass through a doorway;
- an automatic device to ensure the base would settle if the front wheels lost contact with the floor surface, or go over a step;
- a traction roller on the base that made it harder to roll.

All of these various design options were current in 2000 and as a consequence badly designed products had been predominantly edged out of the market.

Clearly new entrants to the market or transient market players do not have the same awareness of the regulations or the commitment of established participants. In this regard the minimalist approach, citing safety requirements for the most severe hazards only has not been effective and a more detailed list of requirements is required.

## **Proposed Shape of the Regulation**

23 The preferred option is to amend *The Product Safety Standards (Baby Walkers) Regulations 2001*, and adopt the new national standard ASTM F977-03 as the mandatory product safety standard baby walkers. It is further proposed that the construction requirements of clause 5 of ASTM F977-03 also be adopted in the new revised regulation. These relate to broad structural integrity requirements as well as scissoring, shearing and pinching hazards, small openings hazards and exposed coil hazards. Details of these requirements are set out in Appendix B.

## Regulatory Options

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### Maintaining the Existing Regulations

24 Maintaining the status quo is not considered a desirable option for any of the product safety standards.

The product safety standards for house hold cots, children's nightwear and children's toys are currently out of step with developments in the marketplace. Maintaining the old versions poses an additional cost to industry for testing purposes and additional costs for both Standards New Zealand and the Ministry in administrative maintenance. New Zealand would also move out of alignment with the Australian regulatory regime.

With regard to the baby walker product safety standard maintaining the status quo is not a viable option. Current enforcement difficulties and the reappearance of inferior product make it imperative that the performance requirements of this standard are made more stringent.

### Removing the Mandatory Product Safety Standards (self regulation)

25 Originally the Product Safety Standards were brought into force to address unsafe design and poor construction of products entering the market. The potential injury risk remains present for the community.

If the mandatory standards were removed the relevant legislative framework would rest with the product safety provisions contained within the Fair Trading Act 1986 and the broad guarantees under the Consumer Guarantees Act 1993 that products sold in trade be safe. Consumers and retailers would have to rely on suppliers to provide adequate information.

Major suppliers of children's products have a long term commitment to this market and reputations to maintain. Small and often transient market participants however are a feature of this market sector. These suppliers appear largely unaware of some of the regulatory requirements and the prospect of gaining their voluntary compliance is not good.

### Revise the Regulations to Reflect the new National Standards (the preferred option)

26 Revising the regulations to adopt the new national standards will ensure that new products entering the market are designed to the new national standards and will enhance the level of protection.

In regard to the household cot, children's nightwear and children's toys standards, adopting the revisions will also:

- maintain an appropriate level of protection;

- reduce costs and complexity for industry;
- reduce uncertainty in interpretation;
- provide benchmarks reached by consensus – (the technical benchmarks have been developed through the respective joint standards committees CS-003 Safety requirements for Children’s Furniture, CS-086 Burning Behaviour of Textile Products and CS-018 Safety Of Children’s Toys with participation by a range of New Zealand committee members, including the Ministry of Consumer Affairs, Barnados, Furniture Association of New Zealand, New Zealand Association of Safety Equipment Testing Laboratories, Commerce Commission, Retailers Association, Royal New Zealand Plunket Society, Wool Research Organisation of New Zealand, Ministry of Health (New Zealand), the New Zealand Toy Distributors Association and SafeKids (New Zealand).

Further grounds for adopting ASTM F977-03 *Standard Consumer Safety Specification for Infant Walkers* are:

- new products entering the market will provide an adequate level of safety;
- ensure that the product safety standard can be more effectively enforced.

## **Submissions Requested**

27 Your comments are sought on any matters raised in this paper or on any other matter that you may consider relevant to assist the Minister in her revision of the:

- *The Product Safety Standards (Household Cots) Regulations 2000*, the mandatory product safety standard for cots for household use;
- *The Product Safety Standards (Children’s Nightwear and Limited Daywear Having Reduced Fire Hazard) Regulations 1999*, the mandatory standard for children’s nightwear;
- *The Product Safety Standards (Children’s Toys) Regulations 1992*, the mandatory standard for toys for children under three years of age;
- *The Product Safety Standards (Baby Walkers) Regulations 2001*, the mandatory standard for baby walkers.

Comments should be with the Ministry of Consumer Affairs by 26 November 2004, and directed to:

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## Appendix A: Comparison of Requirements under AS/NZS ISO8124 Pt 1 to NZS5822 Supplied by Richard Hayman – Member of CS-018 (now chair)

	<u>NZS 5822:1992</u>	<u>AS/NZS ISO8124 Pt 1</u>	<u>Comment</u>
1	<p>SCOPE Up to 3 Years</p> <p>Excludes Marbles, Gramophone Records, Flotation Aid Toys, Bicycles with a wheel base of less than 640mm</p> <p>Includes Dummies</p>	<p>Up to and including 36 Months</p> <p>Excludes bicycles with a seat height greater than 435mm, elastic and string</p> <p>Excludes Dummies</p>	<p>Effectively the same, but Months is tighter and now in more prevalent use Internationally</p> <p>Should be no impact Marbles should not be sold to this age group Gramophone records are not toys Flotation Aids are not toys and are now covered by different standards.</p> <p>Dummies aren't toys Should they be covered elsewhere?</p>
2	<p>DEFINITIONS Based on 'Ingestion and Inhalation Hazard'</p>	<p>Based on parts that fit into 'Small Parts Cylinder'</p>	<p>Same</p>
3	<p>SPECIFIC REQUIREMENTS FOR PARTICULAR TOYS There are requirements for specific toys, (i.e. Stuffed Toys, Pull or Push Toys Having Solid Handles and Protective Tips and Protective Covers) as well as the General requirements.</p> <p>Refer also to 17, 18 &amp; 19 below.</p>	<p>The standard is based on the hazard rather than the specific toy, i.e. small parts are prohibited before and after all tests</p> <p>Requires a warning on toys intended for children between 36 and 73 months with small parts</p>	<p>The effect is the same as the specific requirements are covered within the reasonably foreseeable abuse tests. The new standard is easier to understand. There is no need to search the document for references to a specific item.</p> <p>Note additional warning requirement - most products carry this anyway.</p>
4	<p>GENERAL TEST REQUIREMENTS Based on 'Ingestion and Inhalation Hazard'</p>	<p>Based on parts that fit into 'Small Parts Cylinder'</p>	<p>Same</p>
5	<p>NORMAL USE TEST REQUIREMENTS Tests for toys with moving parts and washable toys Refer to 10 &amp; 11 below</p>		

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6	REASONABLY FORESEEABLE ABUSE TEST REQUIREMENTS Tests for specific toys Refer to 12 through 26 below		
7	APPENDIX A - CONDITIONING Requires 24 hrs in a normal atmosphere	Refer 5.1 - General Requires 4 hrs at a normal temperature	New standard requires less time and only specifies humidity For textile toys No impact expected
8	APPENDIX D - TEST FOR INGESTION OR INHALATION HAZARD Truncated circular right cylinder - ID = 32mm Ht = 25-57mm	Refer 5.2 - Small Parts Test Truncated circular right cylinder - ID = 31.7mm Ht = 25.4 - 57.1mm	Dimensions are close to identical No impact expected
9	APPENDIX E - TEST FOR ACCESSABILITY Defines probe and procedure to determine accessibility of components	Refer 5.7 - Accessibility of a part or component	Same test No Impact
10	APPENDIX F - TEST FOR TOYS WITH MOVING COMPONENTS Specifies no. of cycles for components designed to move	Refer 4.1 and E2 - Normal Use Non-specific tests are required simulating normal use in the toy's expected environment.	Test lab determines process The new test is more flexible and, in effect, more rigorous. No impact expected
11	APPENDIX G - TEST FOR TOYS WHICH ARE LABELLED AS BEING WASHABLE Specifies washing cycles and methods depending on hand or machine wash	Refer 5.23 - Washable Toys Allows label for different wash method	No impact expected

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12	<p>APPENDIX H - DROP TEST</p> <p>Specifies no of drops and height depending on age group</p> <p>Note - The requirements allow that toys for children under 18mths and weighing more than 0.5 kg do not have to be tested and that toys for children between 18mths and 3 years and weighing more than 1.5 kg do not have to be tested</p>	<p>Refer 5.24.2 - Drop Test</p> <p>Specifies no. of drops and height depending on age group and weight of toy.</p> <p>Toys for children under 18mths and weighing more than 1.4 kg do not have to be tested</p> <p>Toys for children between 18mths and 96 months and weighing more than 4.5 kg do not have to be tested</p>	<p>Slight differences in test procedure and increases the range of items that have to be tested.</p> <p>Some products currently allowed may now be disallowed</p> <p>New standard is based on worldwide data so additional requirements should be accepted</p>
13	<p>APPENDIX J - COMPRESSION TEST</p> <p>Specifies compressive force depending on age group</p> <p>100N up to 18 mths</p> <p>125N between 18mths and 3years</p>	<p>Refer 5.24.7 - Compression Test</p> <p>114N up to 36mths</p>	<p>May disallow some toys for children less than 18mths and allow others for those up to 36mths</p> <p>Impact is expected to be slight.</p>
14	<p>APPENDIX K - TIP-OVER TEST FOR TOYS OF LARGE AREA OR VOLUME</p> <p>Applies to a toy with a base area &gt; 0.25sqm or volume &gt; 85L</p>	<p>Refer 5.25.3 - Tip-Over test for large and bulky toys</p> <p>Large and Bulky Toys defined as those with a base area &gt; 0.26sqm or volume &gt; 80L</p>	<p>Slight change to size.</p> <p>Should have no impact</p>
15	<p>APPENDIX L - TEST OF PROJECTILES PROPELLED BY A DISCHARGE MECHANISM</p> <p>Tests a projectile after impact with a rigid surface</p>	<p>No equivalent test</p> <p>Note that Projectiles are not allowed to be small parts before or after testing, regardless of the age for which they are intended</p>	<p>Are projectile toys made for children aged less than 36 mths?</p> <p>No impact expected</p>

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16	APPENDIX M - BITE TEST Tests to determine whether the effect of biting on a toy	No equivalent test	For some toys with small cross sectional-areas, the bite test can have an impact on the subsequent pass or failure of the torque and tension tests Note that this test is not in EN71 or ASTM963 Some product that was previously disallowed may now be allowed. The impact is expected to be slight
17	APPENDIX N - TORQUE TEST Determines the effect of clamping and then twisting a toy at specified torque's depending on age 0.25Nm for less than 18mths 0.375Nm for 18mths to 3 years	Refer 5.24.5 - Torque Test Determines the effect of clamping and then twisting a toy at a specified torque - 0.45Nm	The new standard is significantly more stringent for toys for children up to 18mths Some existing product may not pass.
18	APPENDIX O - TENSION TEST FOR ANY PROJECTION ON A TOY Determines the effect of clamping and then pulling on a toy with specified forces depending on age 50N for less than 18mths 75N for 18mths to 3 years	Refer 5.24.6.1 - Tension Test - General Procedure Determines the effect of clamping and then pulling on a toy with a specified force - 70N	The new standard is more stringent for toys for children up to 18mths Some existing product may not pass.
19	APPENDIX P – SEAM STRENGTH TEST FOR STUFFED TOYS Tension test for fabric and seams of stuffed toys. Fabric and seams are tensioned with specified forces depending on the age of the child, 50N for less than 18mths and 75N for 18mths to 3 years, The toy fails if the seam opening allowed the release of an ingestion or inhalation hazard.	Refer 5.24.6.2 - Tension test for seams in soft-filled and bean-bag type toys. Fabric and seams are tensioned with 70N regardless of intended age. The toy fails if a small part is released	The new standard is more stringent for toys for children up to 18mths in that it uses a greater force, but the toy does not fail unless a small part is released by the test. There is unlikely to be an impact from this

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20	<p>APPENDIX Q - FLEXURE TEST FOR TOYS WITH STIFFENING MEANS FOR RETENTION OF FORM</p> <p>Test to determine if the stiffening material presents a hazard after being flexed</p> <p>Bending force is dependant on age</p> <p>50N for less than 18mths</p> <p>75N for 18mths to 3 years</p>	<p>Refer 5.24.8 - Flexure Test</p> <p>Test to determine if a hazard is produced by flexing the material inside the toy.</p> <p>Bending force is 70N independent of age</p>	<p>The new standard is more rational in that the whole toy is considered. Also the force used is greater for toys intended for children less than 18mths.</p> <p>Some product may be allowed that is not now, but there would be no hazard from this.</p>
21	<p>APPENDIX R - TUMBLE TEST FOR WHEELED TOYS</p> <p>Tests if an ingestion or inhalation hazard is produced when a wheeled toy is tumbled down a specified flight of stairs.</p> <p>Applies to toys heavier than 1.4 kg</p>	<p>Refer 5.24.4 – Dynamic Strength Test for wheeled Ride On Toys</p> <p>The toy is loaded with 25 kg and driven into a non resilient step at 2m/s</p>	<p>It is expected that toys that fail Appendix R would also fail the dynamic strength test.</p> <p>Should be little impact</p>
22	<p>APPENDIX S - TENSION TEST FOR TYRE REMOVAL</p> <p>Tests if a tyre can be removed with specified forces depending on age</p> <p>50N for less than 18mths</p> <p>75N for 18mths to 3 years</p> <p>and if the tyre is removed, whether it produces a hazard</p>	<p>Refer 5.24.6.1- Tension Test - General Procedure</p> <p>Determines the effect of clamping and then pulling on a toy with a specified force - 70N</p>	<p>Any toy failing the Tyre Removal Test will also fail the tension test.</p> <p>The new standard is more stringent for toys for children up to 18mths</p> <p>Some existing product may not pass.</p>
23	<p>APPENDIX T - TENSION TEST FOR WHEELED TOYS HAVING AN AXLE RETAINED BY A SNAP IN FIXTURE</p> <p>Tests whether a snap in axle will be removed with specified forces depending on type of fixture and whether a hazard is produced</p>	<p>Refer 5.24.6.1- Tension Test - General Procedure</p> <p>Determines the effect of clamping and then pulling on a toy with a specified force - 70N</p>	<p>Any toy failing Appendix T will also fail the tension test.</p> <p>The force in the new standard is the same as the highest value in Appendix S.</p> <p>Should be no impact</p>

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24	APPENDIX U - COMPRESSION TEST FOR WHEELED TOYS HAVING AN AXLE RETAINED BY A SNAP IN FIXTURE Tests whether a hazard is produced by compression on a snap in axle that has been removed by the test in Appendix T.	Refer 5.24.7 - Compression Test Determines the effect of pushing on a component with 114N	Any toy failing Appendix U will also fail the compression test. The force in the new standard is higher than in Appendix U Unlikely to have any impact
25	APPENDIX V - TEST FOR MOUTH ACTUATED TOYS Tests whether loose parts are released from mouth actuated toys with specified air flows	Refer 5.20 - Durability of mouth actuated Toys Tests whether loose parts are released from mouth actuated toys with specified air flows Applies to all toys regardless of age	Has same effect for children under 3, so no impact.
26	APPENDIX W - IMPACT TEST FOR TOYS THAT COVER THE EYES Tests whether a hazard is produced when a specified weight is dropped onto an area of a toy that is intended to cover an eye	Refer 5.14 - Impact test for toys that cover the face Tests whether a hazard is produced when a specified weight is dropped onto an area of a toy that is intended to cover an eye	The new standard uses a slightly heavier ball and a slightly higher drop ht. The change is slight, so expected impact is minimal
27		5.3 – Test for Shape and Size of Certain Toys Certain toys are tested for depth of penetration through a standard template	Certain shapes and sizes of toys or components can present choking or suffocation hazards if they enter an infant's mouth and become lodged.  Not included in current NZS 5822, but should be considered

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28		5.4 Small Balls Spherical toys or components are passed through a template to determine if they are 'small balls'	Small balls have been found to be a choking / suffocation hazard for children under 36mths even though they may not fit in the small parts cylinder. Not included in current NZS 5822, but should be considered
29		5.5 Test for Pompoms Test for the size of pompoms	Smaller pompoms are a choking hazard for children under 36mths  Not included in current NZS 5822, but should be considered
30		5.6 Test for Preschool Play Figures Test for depth of penetration of Preschool Play Figures	Certain shapes and sizes of preschool play figures present a choking / suffocation hazard if they enter an infants mouth and become lodged  Not included in current NZS 5822, but should be considered

## Appendix B: Rewrite to Replicate Parts of Clause 5 that we Propose to Adopt

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### STRUCTURAL INTEGRITY

The foldaway walker with its inherent structural design issues were not prevalent in 2000 and is a new design which has come into the market since the introduction of the product safety standard in 2000. It is recommended to mandate the test of ASTM F977 Clause 7.1 *Structural Integrity* to ensure walkers manufactured are structurally sound.

### THE UNITED STATES REGULATION 16 CFR 1500.18 (A) 6

In the United States walkers must comply with the United States Regulation 16 CFR 1500.18 (a) 6. This is a mandatory standard and has been in effect since 1971. The standard primarily addresses possible injuries caused by scissoring, pinching, or shearing in the frame of the walker and by the collapse of the walker. It is recommended to follow the United States requirements mandating further tests to cover other possible design faults. They include:

- (i) The areas about the point on each side of the article where the frame components are joined together to form an “X” shape capable of producing a scissoring, shearing, or pinching effect. This clause is covered by the test of ASTM F977 Clause 5.5 *Scissoring, Shearing, Pinching*.
- (ii) Other areas where two or more parts are joined in such a manner as to permit a rotational movement capable of exerting a scissoring, shearing, or pinching effect. This clause is covered by the test of ASTM F977 Clause 5.5 *Scissoring, Shearing, Pinching*.
- (iii) Exposed coil springs which may expand sufficiently to allow an infant’s finger, toe, or any other part of the anatomy to be inserted, in whole or in part, and injured by being caught between the coils of the spring or between the spring and another part of the article. This clause is covered by the test of ASTM F977 Clause 5.6 *Exposed Coil Springs*.
- (iv) Holes in plates or tubes which provide the possibility of insertion, in whole or in part, of a finger, toe, or any part of the anatomy that could then be injured by the movement of another part of the article. This clause is covered by the test of ASTM F977 Clause 5.4 *Openings*.
- (v) Design and construction that permits accidental collapse while in use. This clause is covered by the test of ASTM F977 Clause 5.3 *Latching or Locking Mechanisms*.