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Regulation Impact Statement

Magnets in Toys

**Product Safety Branch
Australian Competition and Consumer
Commission**

2009

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INTRODUCTION

This Regulation Impact Statement has been prepared by the Australian Competition and Consumer Commission to examine the safety of children's toys containing strong magnets and to consider the need to regulate these toys under the product safety provisions of the Trade Practices Act.

PROBLEM

What is the problem being addressed

Rare earth magnets are a technological development that provides very strong magnetic attraction in a small physical size. These strong magnets have recently been adapted for use as a temporary attachment mechanism in a range of consumer goods. The magnets are used in a variety of children's toys to perform functions such as linking the components of construction sets, linking the carriages of toy train sets and attaching accessories to toys.

The magnets are often small in size and instances have occurred where magnets incorporated in small toy components or released from defective toy components have been ingested by children, resulting in serious injuries. Injuries occur when more than one strong magnet is ingested and they firmly adhere to each other through the walls of the intestine, causing perforations, infection and blockages. Urgent surgery is necessary to remove the ingested magnets.

Deaths

A 20 month old child died in the US as a result of ingesting a number of strong magnets which caused intestinal injuries.

Injury data

In 2006 a 9 year old NSW boy required surgery for intestine perforations and bowel obstruction after he ingested several strong magnets from toys.

A US CPSC safety alert issued in April 2007 titled *Ingested Magnets Can Cause Serious Intestinal Injuries* reports "Small magnets, like those found in magnetic building sets and other toys, can kill children if two or more are swallowed. The US Consumer Product Safety Commission (CPSC) is aware of at least 33 cases of children being injured from ingesting magnets. A 20 month-old died, and at least 19 other children from 10 months to 11 years old required surgery to remove ingested magnets. In many cases, magnets had fallen out of larger components of toys. Some children swallowed intact toy components containing magnets.

The US Dept of Health and Human Services Morbidity and Mortality Weekly Report of 8 December 2006 summarises the 19 US cases where children required surgery to remove ingested magnets.

The ACCC sought a report on injuries to children in Victoria associated with the ingestion of magnets from Monash University Accident Research Centre in

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November 2008. Data collected from Victorian hospital emergency departments over the period 2004 to 2008 shows that there are 39 cases where children ingested magnets. The injuries received do not appear to be severe and may not involve the ingestion of multiple strong magnets, but the data is indicative of the potential for serious injuries through magnet ingestion.

In January 2009, Mater Hospital in Queensland reported they had treated 3 cases where children aged 4-11 years had ingested strong magnets that caused multiple intestine/bowel perforations requiring surgery. The treating paediatric surgeon recommended regulation of the use of magnets in toys and increased public awareness of the associated product safety issue.

Recalls due to Magnets in Toys

There have been seven recalls of children's toys in Australia from 2006 to March 2009 due to problems of magnets separating from toys, creating a possible ingestion hazard.

The recalls listed on the Product Recalls Australia website are as follows:

PRA 2006/8469 – Magnetix construction set (700,000 toys)

PRA 2006/8890 – Polly Pocket playset (100,068 toys)

PRA 2007/9456 – Various Mattel magnetic toys (1,046,600 toys)

PRA 2008/9889 – Magtastik, Magna Man (15,576 toys)

PRA 2008/10280 – World 4 Kids magnetic letters (9,300 toys)

PRA 2008/10467 – National Variety magnetic letters/number set (unknown number)

PRA 2008/10514 – McPhersons magnetic letters/numbers (10,560 toys).

The recalls involve a total of about 1.9 million toys supplied in Australia, and provide evidence that the magnet ingestion hazard is widespread.

The US CPSC reported that five product recalls were undertaken in the US in 2006-2007 concerning magnets in eight million toys.

OBJECTIVES

What are the objectives of proposed government action?

Government action is considered necessary to help reduce the incidence of and potential for injuries to children resulting from the ingestion of strong magnets.

Is there a regulation currently in place?

The NSW Government is preparing a mandatory safety standard for children's toys containing strong magnets, which will require them to carry a label warning of the potential ingestion hazard.

The European Union instituted interim requirements in April 2008 for all toys with magnets to be provided with an ingestion hazard warning pending the development of a safety standard by CEN, the European standards organisation.

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The US CPSC has not instituted mandatory requirements for magnets in toys, but advises toy producers and importers to ensure that any hazardous magnets are not an ingestion hazard in toys for children under 3 years of age.

OPTIONS

The ingestion hazard associated with strong magnets in toys might be addressed by two principal mechanisms:

- government regulation preventing the supply of non-complying products; or
- consumer education to raise awareness of the magnet hazard so that adults may supervise the safe use of the toys.

It is considered that effective consumer education would need to comprise safe use warnings provided with the products. This option might be implemented through two alternate mechanisms:

- an industry code for suppliers to voluntarily provide product warning labels; or
- a government mandated safety standard requiring the provision of product warning labels.

IMPACT ANALYSIS

Impact groups

Action to control the supply of toys containing strong magnets would impact on consumers who purchase the products, industry involved in the supply of the products and government agencies having responsibility for helping ensure the safety of consumer products and for providing health care services.

Option 1 – Government restrictions on the supply of toys containing strong magnets.

The government might consider banning the supply of all children's toys that contain strong magnets. This would prevent any new products containing potentially hazardous magnets falling into the hands of children, and greatly reduce the potential for future injuries.

It is not possible to estimate how many toys would be eliminated from the market under such regulation, but it is known that a wide variety of toys contain magnets and the use of magnets in toys appears to be increasing. Toys are a major industry sector with about \$1.6b of toys sold in Australia each year, and it is estimated that currently strong magnets are an integral component of about 5% of toys, which probably represents 10% of total sales dollars, or about \$160M pa.

Costs and benefits to consumers

Strong magnets are used to enhance the functionality of many popular children's toys. Depriving children of such toys through regulation would be expected to generate strong dissatisfaction among consumers.

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The non-availability of toys with strong magnets would remove the potential for future associated injuries to children.

Costs and benefits to industry

Banning the supply of toys containing strong magnets would prevent suppliers trading in a wide range of products designed for world markets, and would be a serious detriment to Australian suppliers (as estimated above, total lost sales might amount to about \$160M pa).

Costs and benefits to government

The removal from the market of toys containing magnets would benefit government through reduced future demand for government medical services that would otherwise be required to treat associated injuries.

The costs to government would include the cost of development of the regulation (possibly a consumer product ban, say about \$5000) and the ongoing market monitoring to ensure compliance estimated to be about \$40,000 p.a.

The major cost to government would be adverse criticism from the public and industry that might be expected to result from banning a wide range of popular children's toys.

Option 2 – Voluntary industry code for the provision of product warning labels

Suppliers of children's toys might be encouraged to develop and follow a voluntary code of practice requiring that toys containing strong magnets carry labels warning of the ingestion hazard. For suppliers who are members of industry associations, this mechanism would be expected to be very successful. It is noted that many products currently comply with relevant overseas safety standards that include a labelling requirement.

However, toys are supplied by a wide range of businesses that are not necessarily members of industry associations, and voluntary action would result in a large section of the market not being committed to the proposed code. It is estimated that under this option about 20% of magnetic toys may not carry warning labels.

Costs and benefits to consumers

Under this option the majority of magnetic toys on the market would carry safe use warning labels, creating awareness of the ingestion hazard and so reducing the incidence of associated child injury.

However, it is expected that a substantial proportion of toys would not have warning labels, leaving many consumers unaware of the ingestion hazard.

There would be a marginal increase in the cost of toys to cover additional expense of testing and labelling, estimated to be 0-2% depending on the volume of toys supplied and possible pre-existing product compliance with relevant overseas standards.

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Costs and benefits to industry

Industry costs for this option include the development and promotion of an industry code, say about \$10,000 pa.

It is likely that the cost of product testing and labelling would be passed on to consumers in slightly increased prices, but competition from suppliers of non-compliant products could pressure complying suppliers to absorb some of these costs.

Costs and benefits to government

A voluntary industry code of practice would benefit government through the expected reduction in demand for government medical services for treatment of product related injuries.

Option 3 – Government requirement for product warning labels

Government might implement a mandatory safety standard requiring suppliers to adhere to requirements for the provision of safe use warning labels on toys that incorporate strong magnets.

Costs and benefits to consumers

Under this option all children's toys containing strong magnets would carry labels warning of the potential ingestion hazard, ensuring awareness by users. This is expected to reduce the incidence of associated injuries.

There may be a marginal increase in the cost of these toys to cover testing and labelling where standards compliance does not already exist.

Costs and benefits to industry

All industry sectors would need to ensure that magnetic toys comply with a specified safety standard, which may impose costs in sourcing suitable products.

It is likely that any additional costs for product testing and labelling would be passed on to consumers. Where toys do not already comply with relevant safety standards this may result in slightly increased retail prices.

Under the mandatory requirements option all products in the market would comply and suppliers would not be subject to competition from non-complying products.

Compliance with safety standards would reduce the instances of product recalls, thereby benefiting suppliers through reduced operating expenses, product liability risk and reputation damage.

Costs and benefits to government

Government would incur costs in the establishment of a mandatory safety standard (estimated \$10,000) and in the ongoing enforcement of the mandatory requirements through market monitoring (estimated \$40,000 pa).

The expected benefits would be a reduction in injuries associated with the product, thereby reducing demands on government medical services.

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CONSULTATION

This Regulation Impact Statement will be circulated as a draft for consideration by interested parties, being suppliers of magnetic toys, product testing agencies, child injury prevention specialists and State and Territory regulators.

The final recommendation of this RIS will be formulated in light of the responses received during the consultation process.

CONCLUSION AND RECOMMENDED OPTION (Provisional)

Available injury data indicates that toys incorporating strong magnets can be a serious hazard to children. Children frequently put small objects such as magnets that may be found in toys in the mouth, and this can result in the ingestion of magnets leading to serious intestinal injuries.

The first option to ban the supply of toys incorporating strong magnets is considered unacceptable due to the major impact it would have on the market (estimated loss of product sales amounting to about \$160M pa). While the option would potentially be the most effective way to reduce injuries associated with the magnet ingestion hazard, it is expected that consumers would see the banning of a wide range of popular toys as an unnecessary interference in the market. Such action would also prevent suppliers trading in a significant proportion of toys currently on the market.

Alternatively, it is considered that an effective means of addressing the magnet ingestion hazard would be to ensure that toys with strong magnets carry a product label warning of the hazard.

Accordingly, the second option is for industry to voluntarily adhere to a code of practice for the provision of warning labels on relevant toys. It is assessed that this option would be a minimal cost for suppliers and consumers, but would result in the labelling of only about 80% of relevant toys.

The third option whereby government requires compliance with a safety standard which specifies the provision of safe use warning labels is recommended. The cost to industry and consumers may be slightly more than for the voluntary option 2, but would maximise compliance across the toy industry with the desired safety requirements.

Proposed Form of Standard

The US ASTM F963, European EN 71.1 and Australian AS/NZS 8124.1 standards for children's toys include very similar requirements for assessing when a magnet in a toy is regarded as an ingestion hazard, and for the provision of a safe use warning label. These standards provide a sound basis for the proposed mandatory standard.

The Australian Standard for the safety of toys has recently been developed by the relevant Standards Australia technical committee to include requirements for toys containing hazardous magnets for application to the Australian market. The subsequent amendment to the standard is based on EN 71.1 requirements for magnets

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in toys, with some interpretation to clarify meaning in the Australian market. The Australian Standard defines hazardous magnets in terms of their strength and dimensions. Where a toy includes a hazardous magnet or magnetic component the packaging and instructions shall include a statement similar to the following:

“WARNING! The product contains small magnet(s). Swallowed magnets can stick together across intestines causing serious infections and death. Seek immediate medical attention if magnet(s) are swallowed or inhaled.”

This form of the standard is recommended for referencing as a mandatory TPA consumer product safety standard. Attached is a draft Consumer Protection Notice declaring the proposed mandatory standard.

The introduction of the proposed mandatory safety standard would be announced through media releases that describe the new requirements and the hazard being addressed, and the ACCC would publish a suppliers guide on the standard and a product safety brochure alerting consumers to the hazard.

IMPLEMENTATION AND REVIEW

Subject to general agreement to this proposal, it is recommended that a Trade Practices Act consumer product safety standard be declared as soon as possible through a Consumer Protection Notice. The recommended standard would reference relevant clauses of the Australian/New Zealand Standard for the safety of children’s toys, AS/NZS ISO 8124.1, as per the draft proposed Consumer Protection Notice attached.

It is proposed that the new standard would take effect 12 months from the time of declaration in order that suppliers may clear non-complying stock and source new product.

The standard would be reviewed periodically to ensure that it remains effective and relevant to the market.

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ATTACHMENT

COMMONWEALTH OF AUSTRALIA

Trade Practices Act 1974

Consumer Protection Notice No. # of 2009

CONSUMER PRODUCT SAFETY STANDARD FOR MAGNETS IN CHILDREN'S TOYS

I, Christopher Bowen, pursuant to subsection 65E (1) of the Trade Practices Act 1974 and for the purposes of section 65C of that Act, hereby DECLARE that from # XXXX 2010 the consumer product safety standard for magnets in children's toys is the standard approved by Standards Australia specified in Division 1 of the Schedule.

Division 2 of the Schedule defines children's toys for the purposes of this safety standard and defines the scope of the standard.

THE SCHEDULE

Division 1: The Standard

The following clauses of Australian/New Zealand Standard AS/NZS ISO 8124.1:2002, Safety of toys Part 1 – Safety aspects related to mechanical and physical properties, published by Standards Australia on 16 May 2002 and Amendment No. 2 to AS/NZS ISO 8124.1 published by Standards Australia on 20 February 2009:

- i) Clauses 3.55, 3.56 and Figure 6(A);
- ii) Clause 4.28;
- iii) Clause 5.24;
- iv) Clause 5.25 and Figure 22;
- v) Clause C.2.19.

Division 2: Definition of children's toys and scope of the standard

Children's toys are products supplied new that are designed or clearly intended for use in play by children.

Products not included in the scope of this standard include sporting goods, camping goods, bicycles, home and public playground equipment, trampolines, electronic game units, models powered by combustion or steam engines and fashion jewellery.

The requirements specified in this standard do not apply to magnets used in motors, relays, speakers, electrical components, and similar devices where the magnetic properties are not part of the play pattern of the toy.

Dated this day of 2009

Minister for Competition Policy and Consumer Affairs