

## New Amendment to AS/NZS ISO 8124.1:2002

The Joint Standards Australia/Standards New Zealand Committee CS-018 (Safety of Toys) has published a new [Amendment No. 2 on 20 February, 2009](#) to amend the **AS/NZS ISO 8124.1:2002**, the mandatory toy safety standard<sup>1</sup> for Australia and New Zealand.

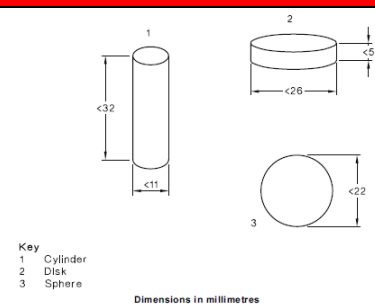


**Amendment No. 2** addresses the safety requirements (see **Table 1**) related to **toys containing hazardous magnets or hazardous magnetic components**, which can be freely downloaded from [SAI GLOBAL](#) or [Standard New Zealand](#).

<sup>1</sup> AS/NZS ISO 8124:2002 is specified as the mandatory product safety standard for toys under (a) the Trade Practices Act 1974, Consumer Protection Notice No. 14 of 2003, as amended by Consumer Protection No. 1 of 2005 in Australia, and (b) the Product Safety Standards (Children's Toys) Regulations 2005 (SR 2005/236) in New Zealand.

**Table 1 – New Requirements under AS/NZS ISO 8124.1:2002/Amdt 2:2009**

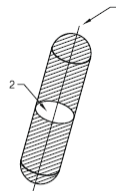
Clause	New Requirements
<b>3.55 (Hazardous magnet)</b>	<p>Add the definition of <b>“Hazardous Magnet”</b>, which is defined as a magnet with a flux index greater than 50 kg<sup>2</sup>mm<sup>2</sup> when determined according to the <b>5.25 (Determination of magnetic flux index)</b> and which is in any of the following shapes and sizes (refer to <b>Figure 6(A)</b>):</p> <ol style="list-style-type: none"> <li>1. A cylinder with a length of not more than 32 mm and a diameter of not more than 11 mm.</li> <li>2. A disk with a diameter of not more than 26 mm and a thickness of not more than 5 mm.</li> <li>3. A sphere with a diameter of not more than 22 mm, or</li> <li>4. Any solid that will fit entirely within the volume or envelop of any of the above defined shapes.</li> </ol>
<b>3.56 (Hazardous magnetic component)</b>	<p>Add the definition of <b>“Hazardous magnetic component”</b>, which is defined as any part of a toy that meets the dimensional criteria set forth in <b>3.55 (Hazardous magnet)</b> that contains an attached or embedded magnet and which has a flux index greater than 50 kg<sup>2</sup>mm<sup>2</sup> when determined according to <b>5.25 (Determination of magnetic flux index)</b>.</p>
<b>4.28 (Magnets)</b>	<p>The new requirements (a) &amp; (b) under <b>4.28 (Magnets)</b> 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.</p> <ol style="list-style-type: none"> <li>a) Toys containing a discrete as-received hazardous magnet or a discrete as-received hazardous magnetic component shall carry a warning (see <b>C.2.19</b> for guidance).</li> <li>b) Toys shall not liberate a hazardous magnet or hazardous magnetic component after being tested for normal use (see <b>4.1</b> for guidance) and reasonably foreseeable abuse in accordance with <b>5.24</b>.</li> </ol>



**Figure 6(A) – Hazardous magnets shapes and sizes**

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**Table 1 (Cont'd) – New Requirements under AS/NZS ISO 8124.1:2002/Amdt 2:2009**

Clause (Cont'd)	New Requirements (Cont'd)
<p><b>5.25 (Determination of Magnetic flux index)</b></p>	<p>Add the test procedures (5.25.1 – 5.25.3) for the calculation of the <b>magnetic flux index</b><sup>a</sup> and <b>Figure 22</b> for illustration of pole surface on a magnet with rounded ends.</p> <p><sup>a</sup> The <b>magnetic flux index</b> (<math>\text{kg}^2\text{mm}^2</math>) is calculated by multiplying the <b>area of the pole surface</b> (<math>\text{mm}^2</math>)<sup>c</sup> of the magnet by the square of the <b>maximum flux density</b> (<math>\text{kg}^2</math>)<sup>b</sup>.</p> <p><sup>b</sup> <b>Flux density</b> is measured by means of a D.C. field gauss meter with a resolution of 5 gauss (G) and an axial type probe having an active area diameter of <math>0.76 \pm 0.13</math> mm with a distance between the active area and probe tip of <math>0.38 \pm 0.13</math> mm.</p> <p><sup>c</sup> <b>Pole surface area</b> is measured by means of caliper or similar device with a resolution of 0.1 mm. If the pole surface of the magnet is flat, area is calculated using the appropriate geometric formula. If the pole is not flat (e.g., hemispherical), the pole surface area is the maximum cross section of the magnet perpendicular to an axis through the magnet poles as illustrated in <b>Figure 22</b>.</p> <div style="text-align: right;">  <p>Key 1 Axis through magnetic poles 2 Maximum cross-section perpendicular to axis</p> <p><b>Figure 22 – Illustration of pole surface on a magnet with rounded ends</b></p> </div>
<p><b>C.2.19 (Magnets)</b></p>	<p>Add the following new labeling requirement for magnets under <b>Annex C (Informative) Safety-labelling guidelines and manufacture's markings</b>:</p> <p>The packaging and instructions of toys which contain loose as-received hazardous magnets or loose as-received hazardous magnetic components should include a statement similar to the following:</p> <p style="color: red;"><b>“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.”</b></p>
<p><b>E. 40 (Magnets)</b></p>	<p>Add the following new clause under <b>Annex E (Informative) Rationale</b>:</p> <p>These requirements apply to all toys. They are intended as an interim measure to partially address ingestion hazards associated with any toys used by all age groups that contain a hazardous magnet or hazardous magnetic component. These requirements 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.</p>

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