



## **About Swan-labelled toys**

**Background document on the  
draft proposal September 2006**



**Nordic Ecolabelling**

## Swan-labelled toys – Background to draft proposal September 2006

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## 1 Summary

A proposal for ecolabelling requirements for toys has now been circulated for comment. This background document provides a description of and the background to the health and environment-related requirements set in the criteria document.

Nordic Ecolabelling has been working on the production of health and environmental requirements for toys for almost a year. The work was initiated following a series of revelations in various media about toys that pose a threat to both health and the environment. These revelations may indicate that the requirements laid down by the authorities for toys sold on the Nordic market are not being fulfilled, and moreover that these requirements are not sufficiently extensive. This type of report causes uncertainty amongst consumers. Ecolabelling toys will provide guidelines that help consumers to make safer choices.

The ecolabelling criteria contain requirements pertaining to the various materials used in toys, and are limited in this version of the document to plastics and rubber, textiles, padding materials, wood-based materials and metals. In addition, separate requirements apply to electric toys.

The requirements were drawn up in close consultation with various manufacturers, suppliers of raw materials, representatives of the public authorities and NGOs. Various Nordic Ecolabelling and Flower criteria documents were also consulted. The objective of the requirements is to bring about a reduction in the use of substances that are harmful to health and the environment, to increase the proportion of certified raw materials used and to reduce emissions of problematical substances to water and the atmosphere.

## 2 Basic facts about the criteria

### **Toys that are eligible for a Swan label**

Toys for children aged below 14 years made of one or more of the following materials are eligible for a Swan label:

- plastic and rubber
- textiles
- padding materials
- wood-based materials
- metals

Materials for which no requirements are imposed may individually make up no more than 1% by weight of the toy. The total quantity of materials for which no requirements are imposed must not exceed 2% by weight.

Typical toys that qualify for a Swan label include rattles and teething toys made of various materials and intended for use by children aged below three years. Building

blocks, dolls, puzzles, electric toys/cars and activity toys that produce light and sound may also be eligible for a Swan label.

Toys that are classified as belonging to product categories for which ecolabelling criteria have already been developed, including textile products, writing instruments and printed matter/paper products may also be Swan-labelled. If so, the requirements in the relevant ecolabelling criteria must be fulfilled. For further information, contact the ecolabelling organisation.

#### **Toys that do not qualify for a Swan label**

Hobby materials cannot be Swan-labelled. Hobby materials are defined as materials used for hobby, handicraft and pictorial art purposes. Examples of materials of this type include modelling wax, clay and plaster.

Toys that are not encompassed by EU Directive No. 88/378/EEC cannot be Swan-labelled. The Directive contains an overview of 21 different product areas that are not classified as toys, including babies dummies, sports equipment, bicycles (except bicycles that are regarded as toys with a maximum seat height of 635 mm), fireworks and faithful reproductions of real firearms (see Appendix 1). Toys of this type cannot be Swan-labelled.

#### **Definition of a toy**

A toy is defined as a product that has been designed, manufactured or sold for the purpose of being used in play by children.

The definition falls within the framework of EU Directive No. 88/378/EEC (children aged below 14 years), but provides for a further limitation in order that the definition should not be excessively restrictive in the first generation of criteria.

##### **INFO. BOX 1**

- Nordic Ecolabelling has developed ecolabelling criteria for over 60 different types of products and services. For further information, see <http://www.ecolabel.no>.
- Council Directive No. 88/378/EEC, The Toys Directive, has been implemented in all the Nordic countries. For further information, see <http://www.sft.no>

#### **The version and validity of the criteria document**

It is planned that the Criteria Document for Toys, Version 1.0, will be adopted in December 2006 by the Board of Nordic Ecolabelling. The criteria will have been circulated for comments between 30 June and 15 September 2006. The criteria will remain in force for four years after their adoption.

##### **INFO. BOX 2. Nordic Ecolabelling**

- The Board of Nordic Ecolabelling is Nordic Ecolabelling's highest decision-making body. The Board comprises the heads of the national boards/committees.
- Swan criteria are valid for a specified period and are then revised. During the revision process the provisions are evaluated and their stringency is increased. A new version of the criteria will be valid for at least one year before the existing criteria cease to apply.

## **2.1 RELEVANCE, POTENTIAL AND CONTROLLABILITY**

Nordic Ecolabelling's work involves developing health and environmental requirements for various products. Before work commences on drafting requirements

for a new product area, three parameters are considered: Relevance, Potential and Controllability (RPC).

*Relevance* is assessed on the basis of whether there are impacts on health and/or the environment associated with the production, use and waste disposal of the products in question. The *potential* for reducing the effects on health and/or the environment of the life cycle of the products is then considered. Finally, the question of whether ecolabelling will provide sufficient *controllability* for the potential improvements to be realised is considered.

The following chapters consider the RPC of toys. In Chapter 4, the RPC of the various materials is described as justification for the requirements applicable to health and the environment.

### **2.1.1 Relevance**

The impact on health and the environment of the production, use and waste processing associated with toys.

The environmental impact of toys will depend to a great extent on the type of toy in question. The materials used in the toy will affect the environmental impact relating to the *extraction and production and waste* processing of the material in question. The materials encompassed by this document are: wood-based materials, metals, plastics and rubber, textiles and padding materials. The environmental problems associated with the extraction and production of these materials, including the use of problematical auxiliary substances and additives such as heavy metals, softeners, halogenated compounds etc., are areas of priority both for the environmental authorities and for Nordic Ecolabelling.

*During the phase in which the product is in use*, the primary focus is on health-related problems, including noise and the migration of substances harmful to health. In recent years, a number of extensive tests have been conducted on toys, revealing a content of substances harmful to health, not only substances regulated by the authorities, but also substances on the warning lists of the authorities<sup>1</sup>. Tests have also revealed a failure to comply with the noise requirements laid down by the authorities<sup>2</sup>. These revelations show that a need exists to impose requirements on the use of harmful substances of this type, and to require manufacturers to submit *documentation and test reports*, not solely self-declarations in accordance with CE labelling (the background for CE labelling is described in Chapter 2.4).

The environmental impact associated with *transport* is also of significance in the case of toys since some 79% of toys in Europe are manufactured in China<sup>3</sup>. A key element when considering transport is the use of packaging. In some cases, the use of packaging is necessary in order to protect the product during carriage. However, packaging is also important in the marketing of the product in retail outlets.

Toys are products that in some cases become *waste* after a very short period of use. The useful life of the product and the scope for recycling the various materials have a bearing on the waste processing and environmental impact associated with the

product. When the toy becomes waste, ingoing components that are harmful to health and the environment will be released.

### **2.1.2 Potential**

The potential for reducing the effects on health and the environment associated with the life cycle of toys.

There have in recent years been numerous findings in toys of substances that are harmful to health, indicating a failure to comply with the requirements laid down by the authorities. This may also suggest that the requirements laid down by the authorities are not sufficiently extensive in terms of the materials and the chemicals used both in the production and the finishing of toys. Accordingly, potential exists for environmental improvements.

Scope exists for differentiating between toys in terms of their environmental and health properties. However, here too this will vary depending on the types of materials used. In the case of plastics and rubber, broad scope exists for distinguishing between various types of plastics and various additives such as plasticiser, catalysers, flame-retardants and colouring agents. In the case of wood-based products, scope exists for distinguishing between the origins of raw materials, as well as the production of panel materials and surface treatment. In the case of textiles and padding materials, it is possible to differentiate between the ways in which raw materials are produced and the additives used to give textiles and padding materials the desired properties. Printing and other surface treatment of textiles are areas in which potential exists for improvements in terms of health and the environment. In the case of metals, potential exists for environmental improvement in the extraction of raw materials, but not in terms of controllability. Nevertheless, products used for coating and surface treatment on metals do provide scope for differentiation.

Indirect environmental effects may occur in instances in which production as a whole is changed, not simply in the case of products that are to be sold on the Nordic market.

### **2.1.3 Controllability**

Swan labelling provides an efficient means of reducing the impact on health and the environment related to the production and use of and waste processing associated with toys.

Experience of other product areas on which Nordic Ecolabelling has worked for a number of years shows that imposing health and environmental requirements on various materials (raw materials, production, use and waste) can provide an effect on health and the environment. In Chapter 4 this is described in greater detail for the various materials.

Ecolabelling also provides controllability by requiring all requirements to be documented by means of test reports and declarations from suppliers and subcontractors. Investigations have shown that there are still toys on the market that fail to comply with the requirements of the authorities.

INFO. BOX 3 Nordic Ecolabelling, RPC for criteria development

Three parameters must be resolved in the development of criteria for the Swan label:

- Relevance – Does an environmental problem exist?
- Potential – Can anything be done about the problem?
- Controllability – Can ecolabelling do anything with the problem?

## 2.2 THE NORDIC MARKET

The market for toys is extensive and it is an international industry. In 2003, sales of toys in the EU (excluding the new member states) totalled euro 13.3 billion. On average, this total 282 euros per child per annum. Sales of toys breakdown as follows:

Table 1 Various categories – traditional toys

Category	Percentage of sales
<b>Baby toys</b>	<b>19,6%</b>
<b>Puzzles/jigsaw puzzles</b>	<b>14,5%</b>
<b>Dolls</b>	<b>12,5%</b>
<b>Cars</b>	<b>9,4%</b>
<b>Outdoor toys and sports toys</b>	<b>10,6%</b>
<b>Construction sets</b>	<b>7,2%</b>
<b>Art and handicrafts</b>	<b>5,8%</b>
<b>Cuddly toys</b>	<b>5,7%</b>
<b>Action toys and accessories</b>	<b>4,7%</b>
<b>Learn and experiment</b>	<b>1,7%</b>
<b>Others</b>	<b>8,3%</b>
<b>Total</b>	<b>100%</b>

Europe accounts for a very small proportion of worldwide toy production. The world's largest toy manufacturers are Mattel, Hasbro and Lego (Danish). In the Nordic countries, the key manufacturers include BRIO, Micki and IKEA. To a great extent, the larger players are involved in product development. 87.9% of actual toy production is conducted in Asia, China being the biggest producer.

Some 70% of total sales of toys in the Nordic countries are through retail outlets, major chains such as BRIO, BR-leker and Toys R Us being the dominant players. Major wholesalers such as BRIO, LEIKA and Leksom supply the retail trade, with some also supplying the institutional market such as schools and nursery schools.

### Interest groupings representing market players

The major trade organisation in Europe is TIE – Toy Industries of Europe. 95% of all companies operating within the toy sector in Europe are members. This includes the national trade organisations, as well as companies throughout Europe operating within the production, development, marketing and sale of toys, games and related products<sup>4</sup>.

The ICTI – International Council of Toy Industries works to promote the health and safety of children. This includes promoting the international toy regulations and working to create responsible attitudes within advertising and marketing directed at children<sup>5</sup>.

### Does the market need an ecolabel?

70% of all toy sales are to private individuals, the largest sector being baby toys. The youngest children are vulnerable and often put toys in their mouths. The media and various consumer organisations have in recent years focused extensive attention on harmful constituent substances in toys. This creates uncertainty amongst consumers and the number of people seeking safe alternatives increases. The Swan labelling of toys, perhaps particularly within the infant sector, would represent a safety factor and provide a quality stamp that could be used by parents and others for guidance in the jungle of products available on the market. There are also increasing demands for public procurers to impose environmental requirements when issuing tenders for deliveries. A Swan label represents a useful tool for this group to use when concluding framework agreements on the delivery of toys to schools and nursery schools.

The signals we have received from the industry indicate that the industry believes that the target group that buys toys for the smallest children (under 3 years) will be the most favourably disposed. Children under the age of 3 are the most vulnerable and as is widely known have a tendency to put everything in their mouths. Moreover, viewed from the perspective of controllability, this group will be of the greatest interest. As children get older they tend to express their own wishes, thereby controlling the toys that are purchased. In these situations, ecolabelling will lose much of its scope for influencing the attitudes and behaviour of the target group.

Table 2. The market for toys in the Nordic countries

<b>Manufacturer</b>			
<b>Name</b>	<b>Country</b>	<b>Sales</b>	<b>Comments</b>
<b>BRIO</b>	<b>Sweden</b>	<b>1595 mill.</b>	<b>Applies to whole of Brio. Brio toys is one of four business areas</b>
<b>LEGO</b>	<b>DK</b>	<b>8.4 billion</b>	<b>Net sales 2003</b>
<b>Micki</b>	<b>Sweden</b>	<b>134 mill.</b>	<b>Same company owns Lundby</b>
<b>Lundby</b>	<b>Sweden</b>	<b>See above</b>	
<b>IKEA</b>	<b>Sweden</b>		<b>Stores throughout the Nordic countries</b>
<b>COOP</b>	<b>Nordic</b>		

<b>Wholesalers</b>			
<b>Name</b>	<b>Country</b>	<b>Sales*</b>	<b>Comments</b>
<b>BRIO AS (+Nordisk)</b>	<b>Norway</b>	<b>330 mill</b>	<b>For own chain</b>
<b>BRIO Lek og Lær</b>	<b>Norway</b>	<b>(Included above)</b>	<b>Schools, nursery schools</b>
<b>RINGO</b>	<b>Norway</b>	<b>64 mill</b>	<b>For own chain</b>
<b>CARLSEN</b>	<b>Norway</b>		<b>For Yes, vi leker</b>
<b>Toyco</b>	<b>Norway</b>	<b>12 mill</b>	<b>For EDWIS</b>
<b>VN leker</b>	<b>Norway</b>	<b>48 mill</b>	<b>Independent stores</b>
<b>Top Toy (+Nordisk)</b>	<b>Norway</b>	<b>1.7 billion</b>	<b>Toys R Us, BR</b>

<b>LEIKA</b>	<b>Norway</b>	<b>9 mill</b>	<b>Schools, nursery schools</b>
<b>TRIGONOR</b>	<b>Norway</b>	<b>12 mill</b>	<b>Schools, nursery schools</b>
<b>Leksam</b>	<b>Sweden</b>	<b>223 billion</b>	
<b>Playbox</b>	<b>Sweden</b>	<b>No information available</b>	
<b>Toyman</b>	<b>Sweden</b>	<b>60 billion</b>	

<b>Retailers</b>				
<b>Name</b>	<b>Country</b>	<b>Type of operation</b>	<b>Size**</b>	<b>Comments</b>
<b>BRIO</b>	<b>Norway (+ Sweden)</b>	<b>Franchise</b>	<b>140 stores</b>	<b>Nord chain manag. in Norway</b>
<b>RINGO</b>	<b>Norway</b>	<b>Franchise</b>	<b>115 stores</b>	
<b>Yes, vi leker</b>	<b>Norway</b>	<b>Franchise</b>	<b>55 stores</b>	<b>Owned by Carlsen</b>
<b>EDWIS</b>	<b>Norway</b>	<b>Branches</b>	<b>23 stores</b>	
<b>Top Toy</b>	<b>Norway (+ Nordic)</b>	<b>Branches</b>	<b>14 stores</b>	<b>Expanding</b>
<b>AS Riktige leker</b>	<b>Norway</b>	<b>Branches</b>	<b>1 stores</b>	<b>Niche, also for nursery schools</b>
<b>Sprell</b>	<b>Norway</b>	<b>Branches</b>	<b>5 stores</b>	<b>Niche</b>
<b>DIV. butikker</b>	<b>Norway</b>	<b>Owned</b>	<b>?</b>	<b>No ties to chains</b>
<b>BR (ägs av Top toy)</b>	<b>Sweden</b>	<b>Branches</b>	<b>57 stores</b>	
<b>ToysRUs (ägs av Top toy)</b>	<b>Sweden</b>	<b>Branches</b>	<b>11 stores</b>	
<b>Babyland</b>	<b>Sweden</b>	<b>Branches</b>	<b>9 stores</b>	
<b>Barnens Hus</b>	<b>Sweden</b>	<b>Branches</b>	<b>16 stores</b>	
<b>Lekia &amp; Leklandet</b>	<b>Sweden</b>	<b>Franchise</b>	<b>43 stores</b>	
<b>Brio Partner</b>	<b>Sweden</b>	<b>Franchise</b>	<b>290 stores</b>	<b>Swe, Nor and Pol</b>
<b>BR</b>	<b>Denmark</b>	<b>Chain</b>		
<b>KREA</b>	<b>Denmark</b>	<b>Private/professional</b>		

\* Sales figures Norway: Bizkit, www.dn.no

\*\* Information on retail outlets in Norway provided by Bransjerådet for Leker og Hobby  
Information on Swedish companies for 2003 provided by Bolagsguiden at www.dn.se

## **2.3 OTHER LABELLING SCHEMES**

### **Regulations applicable to the industry**

Extensive official regulations apply to the production, importation and sale of toys in the Nordic countries. Producers, importers and vendors are required to acquire knowledge about potential hazards and to disclose such information. This duty of care as provided for in the Product Control Act means that manufacturers, importers and dealers must be aware of the requirements applicable to toys and other products intended for children. Many of the rules in force in the Nordic countries are harmonised with those of the EU.

Special requirements apply to most types of toys. Businesses must be aware of environmental conditions in their own operations that may involve a not inconsiderable effect on the environment. In Norway, environmental information must be provided on demand, e.g. actual information on the contents of the product. A reply must normally be given within one month. The environment means the

external environment. The requirements are provided in the Environmental Information Act<sup>6</sup>.

The requirements applicable to toys are provided in the Regulations on the Safety of Toys (the Toy Regulations). These Regulations are based on an EU Toy Directive and equivalent regulations are in force in all EEA states. The Regulations contain requirements on the labelling and documentation of the properties of the toy. Some requirements as to the properties of toys are contained in the Regulations or appendices to the Regulations, although most are contained in various standards. The standards in question are common to most European countries. The standards cover a wide range of risks, for example, sharp edges, the strength and length of cords, noise, small parts, the content of miscellaneous chemical substances, labelling, the content of instructions for use etc. Detailed instructions are provided on the way in which measurements are to be conducted.

#### INFO. BOX 4. Standards

##### Overview of standards:

- Mechanical and physical properties (EN 71-1)
- Flammability (EN 71-2)
- Migration of certain elements (EN 71-3)
- Experimental sets for chemistry and related activities (EN 71-4)
- Chemical toys (sets) other than experimental sets (EN 71-5)
- Graphical symbols for age-warning labelling (EN 71-6)
- Finger paints – requirements and test methods (EN 71-7)
- Safety of electric toys (EN 50088)
- Safety of power transformers, power supply units and similar (EN 61558)

All toys on sale must carry a CE mark (Section 15 of the Toys Regulations). The CE mark does not constitute approval by the authorities, rather it is a declaration from the manufacturer that the toy complies with the requirements of the Toy Directive and the associated standards.

All toys on sale must carry the name or trademark and address of the manufacturer or agent (Section 14 of the Toy Regulations). Many types of toys are required to carry special warnings, such as toys containing small parts and toys with special physical or chemical properties. Further details are provided in the various standards.

The individual manufacturers are responsible for ensuring that the toys they produce comply with the requirements. Manufacturers must document compliance with the requirements by providing a declaration of compliance. If the properties of the toy are covered by one or more of the standards and the toy is in compliance with these requirements, the manufacturer's documentation must comprise the following:

- product identification (type of toy, description)
- the way in which the manufacturer ensures that the toy remains in compliance with the standards (test reports or technical data)
- design and production data on the individual toy
- the name and address of the production and storage site.

This documentation

- must be in English or in a Scandinavian language
- must be stored within the European Economic Area
- must be available for 10 years after the production of the toy ceases
- may also be compiled by the manufacturer's agent or importer to the EEA

If the properties of the toy are not covered by one or more of the standards, or if the toy does not fulfil the requirements of the standards, the toy must be approved by a special technical control body. In this case, a third party declaration to this effect must be submitted. The manufacturer must attach a CE mark. As has already been noted, this represents the manufacturer's declaration that the toy is in compliance with the requirements of the standards.

If the properties of the toy are not covered by one or more of the standards or do not comply with the requirements of the standards, a third party declaration must be submitted. In this case, the CE mark represents the manufacturer's guarantee that the toy is in compliance with the sample that has been type approved in accordance with the third party declaration.

CE-labelling is arranged by the manufacturer or the manufacturer's representative in the EEA and represents a guarantee that the toy satisfies the requirements of the EU Toy Directive. Thus, this does not constitute approval.

The importer is responsible for ensuring that the imported toys comply with the requirements. The importer must be in possession of the manufacturer's documentation of the toy's compliance with the requirements. This is not necessary if a primary importer/agent in the EEA is in possession of the documentation. However, in this case the importer must be able to acquire the documentation at short notice. The importer must ensure that the toy carries a CE mark.

Retailers must ensure that the toys they sell carry CE marks. The sale of non-CE-labelled toys is not permitted. Retailers also have a duty of care. They must assess the toys they sell and, if necessary, request further documentation from the manufacturer, agent or importer.

Retailers must be able to obtain the necessary documentation from the manufacturer or agent within short time of a request by the regulatory authorities.

In some areas, the authorities in the Nordic countries impose special requirements that go beyond the European requirements. In Norway, it has been unlawful since 2000 to sell toys and a number of other products for small children containing phthalates for use by children aged under three years. In the European regulations, the requirement is limited to 6 phthalates. A new proposal for European requirements on phthalates has now been circulated for comment (see Chap. 4.2

### **Voluntary standards and labelling schemes**

As far as we are aware, no public ecolabelling schemes for toys exists. On the other hand, there are some labelling schemes that might be perceived as ecolabelling schemes, but that provide only guarantees of, for example, good quality.

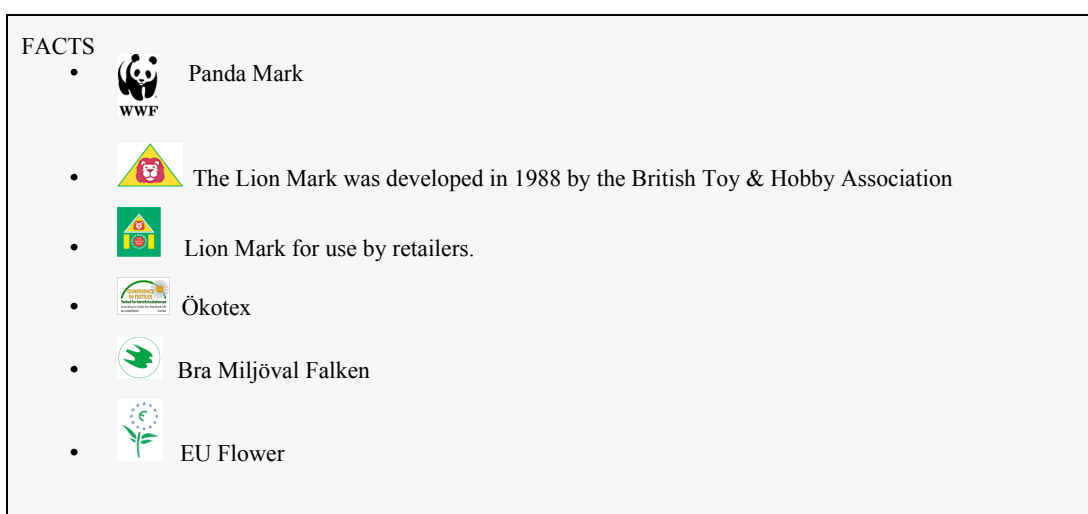
One example of a label of this type is the OK label, which Spanish toy manufacturers may use on their toys provided that the products fulfil specific requirements as to quality and “play value”<sup>7</sup>.

Another label that might be seen as an ecolabel is the WWF Panda label. A toy that carries the Panda label evidences the manufacturer’s support for the WWF’s work to safeguard biodiversity and to protect the environment. The label does not of itself provide any guarantees as to the environmental impact associated with the product<sup>8</sup>.

The UK trade organisation British Toy and Hobby Association has created two labels: “The Lion Mark” and “Lion Mark for use by retailers”. These marks were developed in 1988 and 1991, respectively. According to the organisation, these marks are “a symbol of toy safety and quality for the consumer, exactly what the CE Mark is not”<sup>9</sup>.

The European Flower, Økotex and Bra Miljöval schemes include requirements for textiles but not toys. This means that some types of toys, such as play mats for use in nursery schools, are labelled with an ecolabel<sup>10</sup>.

Fællesrådet for formnings- og hobbyartikler (The Joint Council for Creative and Hobby Materials) is a Danish organisation that has drawn up environmental requirements for materials used for hobby, handicraft and pictorial art purposes. Examples of these materials include modelling wax, clay and plaster. The labelling is divided into groups A, B, C and D indicating areas of use, constituent substances and age limits<sup>11</sup>. The Panduro Hobby chain uses this scheme. Suppliers to schools and nursery schools also this labelling scheme to a certain extent in their catalogues for handicraft and hobby materials (LEIKA og BRIO Lek og Lær). This version of the criteria does not encompass hobby materials.



### The toy industry’s own requirements

A number of toy manufacturers have their own guidelines on health, environment and ethics. The manufacturers' websites describe the work they do. In addition, the ITIC

has drawn up ethical guidelines under which toy manufacturers in China are given the opportunity to obtain a "Seal of compliance" (this is described in further detail in Chapters 2.3 and 4.12).

### **3 The criteria development process**

#### **The purpose of developing criteria for toys**

The primary aim of Nordic Ecolabelling is help bring about consumption that is less harmful to health and the environment. This can be achieved by guiding consumers and exploiting market forces with a view to achieving health and environmental gains. Since this is a voluntary scheme, the health and environmental requirements can be set at a higher level than the requirements laid down by the authorities.

Children are a vulnerable group, and are exposed to a broad range of products during the course of a day, including toys. Between infancy and their teenage years, children are surrounded by toys. Many risk analyses have been performed on the possible impact on children of various substances that are harmful to health. However, little or no research exists showing the actual effects. What is certain is that there are numerous products in a child's immediate environment that will contain substances that are harmful to both health and the environment.

Moreover, the production of toys involves the use of a large number of substances that are harmful to health and the environment, the raw materials used may have negative environmental effects and when the toys are disposed of, many of the constituent substances may have negative effects on the environment.

The regulations governing the production, sale and importation of toys are extensive. Nevertheless, tests frequently reveal non-compliance with the requirements. The media debate surrounding harmful substances in toys may have increased the need for a guarantee from toy sellers that the toys they sell do not contain such substances.

Accordingly, the purpose of developing criteria for toys is to give consumers the opportunity to choose a Swan-labelled toy which will comply with strict health and environmental requirements throughout its life cycle.

#### **Project description**

The project to draft requirements for a Swan Label for toys commenced in August 2005. The project group has consisted of Project Manager Lise Kristin Sunsbj of Stiftelsen Miljømerking i Norge, Anders Moberg of SIS Miljömärkning, Mogens Stibolt (Lene Møldrup until February 2006) of Miljømerkesekretariatet i Danmark and Marte K. Halvorsen of Stiftelsen Miljømerking. The project work proceeded in close cooperation with the marketing departments of the various secretariats, represented by Cathrine K Elger in Norway, Karl Johan Wall in Sweden and Lene Møldrup in Denmark.

Throughout this period, the project group was in close contact with various

manufacturers/importers, authorities, NGOs, raw material producers and trade organisations.

On 20 March 2006 an ethics workshop was held, the object of which was to formulate the basis for imposing sound and documentable ethical requirements applicable to the production of Swan-labelled toys (see Chapter 4.12). The discussions and presentations at the workshop provided the basis for the requirements applicable to working conditions.

Draft criteria were presented to TIE's Safety and Environment and Technical Committee in Brussels on 21 March 2006. Comments received at the meeting were incorporated in the ongoing discussion on requirements and the stringency of requirements.

The project group also visited a number of toy manufacturers in Europe and China.

## **4 The background to the requirements**

All the requirements in the proposal have been justified on the basis of effects on health and the environment. In developing health and environmental requirements, the focus has been on the life cycle of the toy. The project group has not found LCA studies comparing the health and environmental effects of toys made of different materials. The requirements have therefore been formulated on the basis of an assessment of the RPC of each individual material (see Chapter 2.1). Even where both relevance (R) and potential (P) are present, it will not always be useful to impose requirements if controllability (C) is zero.

The own weight of materials differ and they are present in toys in different quantities. In the table below, four different toys have been dismantled into their individual components. The various materials have then been weighed.

The following toys were weighed:

- Textile book: A book made of textile with print on each side. Padding material makes the pages bulkier. Various plastic parts are set into the edges of the book. These produce sounds. A plastic "mirror" is attached to the back cover.
- Baby's rattle 1: Plastic rattle with a handle. A metal core produces sound.
- Baby's rattle 2: A textile bear with a plastic rattle attached.
- Wooden toy with wheels: A wooden toy with a core of plastic/metal covered with padding and textile material. The wooden parts are glued together. 90% of the surface of the toy is coated.

Table 3: Weight ratio between materials in 5 different toys

Toy	Textile book		Baby's rattle 1		Baby's rattle 2		Wooden toy with wheels	
Material	Weight	Weight%	Weight	Weight %	Weight	Weight %	Weight	Weight %
Wood	0 g	0	0 g	0	0 g	0	330 g	85,5
Plastic	17 g	17,9	62 g	86	26 g	47,3	40 g	10,4
Metal	0 g	0	10 g	14	0 g	0	0 g	0
Textile	55 g	57,9	0 g	0	19 g	34,5	6 g	1,6
Padding material	23 g	24,2	0 g	0	10 g	18,2	10 g	2,5

The table shows that the quantity of the various materials varies widely from toy to toy. The Nordic market includes toys containing every combination of the various materials and toys comprising only one of the materials. Accordingly, the stringency of the requirements will vary depending on the proportion of each material in the toy.

#### 4.1 DESCRIPTION OF THE TOY AND ITS PRODUCTION

The criteria document imposes requirements on the materials used in the product for which a licence is sought. To allow a rapid overview to be gained of the requirements that are relevant to the individual product, the toy must be described with details of the constituent materials and their weight. If a licence is sought for a group of toys with different designs and appearances, but where the constituent materials are the same, information may be provided on one or more representative products (see the example in Appendix 2).

When completing Form 2 in the criteria document, the manufacturer of the toy will quickly see which requirements will need to be fulfilled by the product in question. In addition, separate forms have been drafted for completion by any subcontractors or chemical suppliers. These forms have been included in order to facilitate the application process, although equivalent documentation may be accepted. All requirements must be fulfilled, and the documents must be signed by firms with sufficient information on the product or the ingoing raw materials or chemicals.

In addition, the production process for the product must be described, including subcontractors used for any constituent materials. This can be described in the form of a flow chart.

#### 4.2 PLASTIC AND RUBBER

Plastic toys or toys containing plastic and rubber make up a large portion of the overall toy market and the category encompasses toys for all age groups. Plastic toys can be anything from simple building blocks to complicated construction sets. One and the same toy may contain many different types of plastic and rubber.

Since plastic and rubber may make up the entire toy or simply a small part, it is important to impose requirements that take account of the toy's overall effect on health and the environment. This is achieved by assessing the areas in which it is relevant to impose requirements. Requirements may be imposed on the extraction and

production of the raw material, the type of raw material used, the additives used, or to the scope offered for recycling the finished product. The potential for improvement within the various areas has also been considered in the form of an assessment of whether in environmental terms any particular types of plastic are more favourable when viewed from the perspective of the points discussed above. Finally, the question of whether it is realistic to expect the requirements to be fulfilled is assessed, e.g. whether manufacturers can choose replacements for substances that are harmful to health and the environment.

### **General comments on plastics<sup>12</sup>**

Plastic products of a wide variety of types are found everywhere in modern society and it is hard to imagine a world without plastics. At the same time, plastics are a very heterogeneous group of materials, and the various types of plastics have different properties, areas of use and are produced by different methods. There are two main groups of plastics: thermoplastic and thermosetting plastic.

The thermoplastics consist of long-chained or branched molecules and retain their mouldability. They can be reheated and remoulded. This is not possible with thermosetting plastics. Their molecules form three-dimensional networks, which are chemically hardened during moulding. The thermoplastics are dominant in terms of both number of plastics and quantities. Those that are easiest to work, reasonably priced and used in large quantities are known as volume plastics (PE-polyethylene, PP-polypropylene, PS-polystyrene, PVC-polyvinyl chloride etc.). Materials with special properties that are used for more demanding functions, are termed engineering plastics or technical plastics (PA-polyamide, PC-polycarbonate, etc.). These are frequently more difficult to work into products and are more costly.

Most plastic materials contain additives, which may be organic or inorganic compounds that change the properties of the plastics. The following types of additives are common: stabilisers (increase the resilience of the plastic), fire-retardants, lubricants (improve properties during moulding), plasticisers (e.g. phthalates), fillers, additives that reduce static electricity, blowing agents (added to introduce gas pores in the plastic) and reinforcement (increases strength, material is referred to as a composite).

### **What types of plastic and rubber are used in toys?**

The market for plastic toys (all-plastic products or products containing plastic and rubber) comprises a large number of types of toys for all ages. Accordingly, the requirements generally cover all types of plastic and rubber. Considerable research is conducted into plastic and new materials are launched on the market on a regular basis.

Many manufacturers provide information on the materials used in their toys on their official websites. A few examples follow:

**Leika**<sup>13</sup>

"It is important to us that our toy products should be above reproach in terms of their environmental properties and quality. For this reason no toys in our programme contain **phthalates**".

**BRIO**<sup>14</sup>

"This year's new Ambi products feature both sound and light! Our well-known brand Ambi makes fun toys from **PVC-free recyclable plastics**. The shiny, easy-to-handle toys appeal to both children and adults.

**LEGO**<sup>15</sup>

"As far as possible, the LEGO Group avoids using any type of plasticiser (**phthalates**) in its products"

#### **4.2.1 The background to the requirements imposed on plastics and rubber**

Requirements R2-R9 apply to plastic/plastic parts and rubber present in toys in quantities in excess of 1% by weight. Plastics and rubber must be described in terms of their polymers and the proportion of fillers.

**Recycled plastic**

Many products available on the market today are produced from recycled plastic. Examples include furniture/furniture parts, clothes and carrier bags. Toys also contain recycled plastic.

As a general rule, recycled plastic has a favourable effect on the environment. Raw materials are used several times before becoming waste products. The problem with recycled plastics is that in many cases the contents of the plastics are not known. Work is under way to produce methods of testing this. At present, element analyses or GC/MS are available, but these are costly processes.

Since toys are products that come into close contact with children, requirements must be imposed as to the content of pollutants (heavy metals, chemicals, compounds that cause smells) in the recycled plastic where such plastics are used. Accordingly, the criteria impose the same requirements on recycled plastic as on virgin plastic. The requirements applicable to additives and pollutants, pigments and fragrance must therefore be met.

**PVC**

Polyvinyl chloride (PVC) is used in numerous different plastic toys. PVC is a cheap material and is suitable for use in a wide range of toys. Both hard and soft (containing plasticisers) PVC is used in toys.

The main problem areas associated with PVC are:

1. Dioxin emissions
2. Additives
3. Waste processing

**Dioxin emissions from the production of PVC/<sup>16/17</sup>**

Small quantities of highly toxic dioxins may be formed during the production of PVC. The PVC Information Council in Denmark is of the view that if the technology and safety measures at the production facility are operating satisfactorily, most although not all dioxin emissions will be captured. In Sweden the environmental authorities report that the production of PVC raw materials accounts for some 1% of total quantities of dioxins formed in the country.

In less modern plants, dioxins may be released to humans and the environment through emissions from PVC production. In the case of toys, where over 90% of production takes place in countries outside Europe, production may represent a serious pollution source and accordingly restricting the use of PVC in toys would be relevant.

**Additives/<sup>18/19</sup>***Stabilisers*

PVC needs to be stabilised in order to withstand the temperature necessary to produce a PVC product. The stabilisers may be based on lead, metal compounds, (such as barium-zinc and calcium-zinc), tin or cadmium. 70% of all tin compounds that are produced are used for stabilising PVC [x].

70 % of the stabilisers used in PVC contain lead. Cadmium and zinc too are still used as stabilisers in PVC [x]. The PVC industry in Northern Europe has phased out the use of lead in stabilisers and a plan is being drafted for phasing out the use of lead for this purpose throughout Europe by 2015.

The industry in Europe undertook to cease production of stabilisers containing cadmium in 2001. However, PVC products imported from the rest of the world are not subject to the same European restrictions on the use of lead or cadmium [x].

15,000 tons of organotin compounds were used in stabilisers in PVC in 1998, which was equivalent to 9.3 % of total European consumption of stabilisers [x].

*Plasticisers/<sup>20/21</sup>*

Phthalates and adipates, amongst other substances, are used as plasticisers in PVC to give the plastic the desired properties. Phthalates are not chemically bound to the plastic and may leak out of the products. Phthalates have long been suspected of various effects on health:

- DEHP (Di(2-ethylhexyl)phthalate, DBP (Dibutylphthalate) and BBP (Benzylbutylphthalate) are classified as toxic for reproduction (R60, R61 and R62)
- DINP (diisononylphthalate), DIDP (diisodecylphthalate), DNOP (dioctylphthalate) are not classified, but the possibility that these substances pose a risk if used in toys and children's articles cannot be ruled out. An EU Commission Working Group has found that both DIDP and DINP cause endocrine disruption in category II [x]. The reason that this has not resulted in an official EU classification is that there is no classification for endocrine disruption

(which must not be confused with harm to fertility, i.e. harm to reproduction). Animal experiments have also shown that in high concentrations (above the classification level) DINP and DIDP can result in damage to the foetus, fertility and liver.

A proposal for a European ban on the use of the three phthalates that are most harmful to health and the environment (DEHP, DBP and BBP) in toys and children's articles has been circulated for comments, and will probably come into force on 1 January 2009. Also proposed is a ban on three other phthalates, (DINP, DIDP and DNOP) in toys and children's articles that children are likely to suck or chew. The ban will apply where the concentration of phthalates in those parts of the product that have been plasticised exceeds 0.1% by weight.

### **Waste<sup>9</sup>**

Approximately 50 % of the chlorine ions generated by incineration plants in Europe derive from PVC. The greatest environmental problems associated with the incineration of PVC are emissions of dioxins and the formation of waste in the neutralisation of the hydrochloric acid that is formed. Waste incineration accounted for approximately 40% of total emissions of dioxins in the European Union in the period 1993-1995 [2]. However, modern treatment technology has reduced emissions considerably. In the European Union, there are now limits on the permitted emissions of dioxins from incineration plants, although these threshold values are not universally observed [2]. Depending on the technology used for treating the flue gases, between 0.5 and 2 kg of waste is formed for every kilo of PVC that is incinerated. [2]. Moreover, this waste may contain heavy metals that make recycling difficult.

### **Conclusion**

The environmental impacts associated with the production, use and disposal of PVC are gradually being reduced, as a result of factors that include new knowledge and technological development. Nevertheless, there is every indication that PVC is still a source of major problems. Nor is the control of PVC imported to the EU and the Nordic countries from other parts of the world sufficiently effective and this may cause problems in the form of the presence of substances that are harmful to health and the environment in PVC used in toys.

In addition, the attitudes of some of the major toy manufacturers show that they avoid PVC entirely or to a large extent, or that they do not use additives such as phthalates to plasticise PVC. The consultative proposal is therefore that PVC should be prohibited in Swan-labelled toys, with some few exceptions.

### **Exception from the PVC requirement**

An exemption is granted in the case of areas where for safety reasons PVC may represent the best choice of material (e.g. wiring). The reason that PVC is permitted in wiring is based on feedback concerning a variety of problems associated with PVC-free wires. PVC-free wires delivered by various cable manufacturers can in some cases be too stiff, or unable to withstand being stepped on. From a safety perspective, it is important that exposed wires must be able to withstand heavy strains. PVC-free cables are primarily best suited for use in areas in which the wiring is fixed and

remains in place. The advantage of using PVC in wiring is that it has insulating properties, is capable of withstanding variations in temperature and has inherent flame-retardant properties, as a result of its chlorine content.

When PVC is used, the other requirements applicable to plastics must be met, with the exception of the ban on the use of phthalates. No other requirements but the phthalate requirements laid down by the authorities will apply to PVC wiring.

### **Additives and pollutants (R4)**

#### **Additives**

As has already been noted, various substances are added to the plastic in order to give it the desired properties and requirements are imposed with regard to these additives. These requirements will also apply to colourants and fragrance. The other requirements applicable to colourants and fragrance will be discussed in the next chapters.

Generally, the requirements of the authorities as contained in the Toy Regulations take the form of a requirement as to chemical properties (Chapter 4): "Toys shall not contain, release or form substances or products classified as harmful to health in accordance to the applicable regulations on labelling, sales etc. of chemical substances and products that made pose a hazard to health (Regulations on the labelling of hazards to health), or substances and products with equivalent properties in a concentration or form that may pose a hazard to the health of children.

Toys shall be designed in made in such a way that the risk of harm to the user or third parties posed by the contents of the toy or its emission of certain named elements is reduced to a minimum. The elements and threshold values in question are specified in Appendix 9."

The requirements in the criteria document pursue the requirements of the authorities by posing quantitative, substantive requirements. Nordic Ecolabelling has difficulty in relating to requirements that are formulated as "... in a concentration or form that may pose a hazard to the health of children".

The requirements contain a general prohibition against the use of substances or mixtures of substances that are classified as carcinogenic (R45, R49, R40), harmful for reproduction (R46, R40) and/or harmful for fertility (R60, R61 R62, R63) in accordance with the EU Dangerous Substances Directive 67/548/EEC and the Dangerous Preparations Directive 1999/45/EC with adaptations.

Additives based on cadmium, mercury and compounds of these elements have been used as stabilisers in PVC and are prohibited. The same applies to organotin compounds. In addition, dyestuffs for plastic products may be based on the above specified heavy metals. These compounds have considerable potential for negative effects on health and the environment if they migrate into the environment. For this reason, the requirements contain a ban on the use of these additives.

*Phthalates*

Phthalates do not bond chemically with the plastic and may therefore be emitted during use. If a child repeatedly sucks or chews on a product containing phthalates, there is a danger of negative long-term effects (harm to the unborn child or reduced fertility).

Tests performed on plastic toys have revealed the presence of phthalates. This indicates that the requirements laid down by the authorities are not always fulfilled and that the requirements are not sufficiently extensive.

Phthalates may also be present in fragrance and pigments added to plastic. The ecolabelling requirements apply to all phthalates.

*Halogenated organic compounds*

One of the effects of a ban on halogenated organic compounds would be to prevent the use of brominated flame-retardants and other alternative flame retardants containing halogens such as chlorinated paraffins and chlorinate phosphate compounds (TCPP; TDCP).

These are compounds that are not readily degradable and have effects on health or that may give rise to such compounds. When incinerated, products containing halogens may release halogens as free radicals, which in turn have a flame-retardant effect. The problem is that these radicals may form non-readily degradable compounds with negative effects on health. Moreover, some flame-retardants are suspected of impairing fertility and being the cause of harm to the unborn child and cancer<sup>22</sup>.

*Nitrosamines in rubber<sup>23/24</sup>*

Reports were received from Germany in July 2002 of high emissions of nitrosamines and nitrosamine-forming substances from balloons. Nitrosamines are suspected of being carcinogenic. Nitrosamines are bi-products that are formed during the production of rubber. Requirements laid down by the authorities limit the content of nitrosamines and nitrosamine-forming substances in bottle teats and dummies made of rubber or other elastomers. No official requirements exist as at the present time with regard to the permitted content of nitrosamines and nitrosamine-forming substances in toys. Work is under way in Europe at present (under the auspices of CEN) to evaluate whether requirements should be imposed with respect to the content of these substances in toys.

A study conducted in the Netherlands tested the content of nitrosamines and nitrosamine-forming substances in 57 different balloons (EN12868), using a test period of one hour rather than 24 hours (to illustrate the natural contact between a child and balloons, compared with bottle teats and dummies). Some of the balloons contained up to 15 times more than the permitted threshold values for bottle teats and dummies. A risk analysis has been conducted in which various scenarios involving children playing with balloons containing nitrosamines and nitrosamine-forming substances were assessed. The conclusion of the risk analysis is that balloons do not represent a health risk or cancer risk for children.

Nevertheless, Nordic Ecolabelling wishes to follow the precautionary principle. Accordingly, the requirements applicable to Swan-labelled toys as regards their content of nitrosamines and nitrosamine-forming substances is equivalent to the requirements applicable to bottle teats and dummies made of rubber or other elastomers.

### **Colourants** <sup>25/26</sup>

The requirements applicable to colourants encompass both colourants used for dyeing plastics and rubber and those used for the surface treatment of plastic and rubber. The additives requirements in R4 must be fulfilled by all colourants.

In addition, there is a requirement that pigments used for dyeing or surface treatment in plastic/plastic parts and rubber must be approved under the EU guidelines on materials that come into contact with food or pigments must be approved by the Food and Drug Administration (FDA).

The official requirements applicable to materials that come into contact with food will apply to some toys, for example plastic kitchen sets and other kitchen equipment. Although other plastic toys are not included, in the case of toys intended for use by children under the age of three there is a requirement that the provisions of the regulations must be met. Children in this age group put toys in their mouth and will be directly exposed to any migration from the toy of substances that are harmful to health and the environment. The general rule in the regulations is that migration of substances to food is to be avoided, and accordingly, it will be relevant to impose the same requirements on materials that come into direct contact with mucous membranes in the mouth.

### **Fragrances**

The requirements applicable to fragrances encompass all fragrance substances added to plastics/plastic parts and rubber. Fragrances must fulfil the requirements applicable to additives in R4.

The background to the fragrance requirements is described in Chapter 4.9.

### **Areas in which no requirements are imposed**

Mineral oil is the main raw material in plastic and a wide variety of production techniques exist in which different methods of polymerisation are used. Energy consumption in the production of plastic varies, and in general, the production of volume plastic is the least energy intensive. The production of technical plastic is more energy intensive, but the quality of these plastics is often high and it used in numerous types of toys with long useful lives.

It is difficult to obtain sufficient data about the amount of energy consumed in plastic production, and in this version of the criteria, no requirements will be imposed with regard to raw material production.

Plastics can also be produced using renewable raw materials. However, the knowledge and controllability required to impose requirements with regard to this type of raw material is not available at present.

### **4.3 TEXTILES, SKINS AND LEATHER**

Textile fibres, skins and leather are used in a variety of different toys and are the main material (on the surface) of soft toys, such as plush animals. Plush animals come into close contact with the child's skin and may, in some cases, be close to the child at night. Accordingly, it is important to impose requirements on textiles, skin and leather even if in terms of weight the material does not make up a major part of the toy. The net weight of textile fibres is low.

Requirements R10-R27 apply to textiles. If the textile is Swan-labelled or labelled with the EU Flower, all requirements will have been fulfilled, except the fragrance requirements if such substances have been added. In the case of non-eco-labelled textiles, the relevant requirements must be fulfilled.

All the textile fibre requirements in the consultative document (with the exception of the fragrance requirement) have been taken from the European Flower Criteria for Textiles<sup>27</sup>. The background is described in "Background Report April 2002".

The background to the fragrance requirements is described in Chapter 4.9.

It has been decided that the criteria for toys should initially focus on requirements applicable to auxiliary chemicals used in the production of textiles, the dyeing of textiles, the printing of textiles, the formaldehyde content, the finishing of the textile and, if applicable, the addition of fragrance to the textile. These requirements must be fulfilled even if the textile makes up only a small part of the toy. The requirement is justified on the grounds that these chemicals will be present in the toy, and may in some cases be capable of migration.

In the case of toys where the textile content exceeds 50% by weight, there are additional requirements as to colour fastness (allowing the toy to be washed) and to the production of the raw materials wool and cotton.

### **4.4 PADDING MATERIALS**

Padding materials are present in a wide variety of toys, nearly always in combination with textiles. Although padding materials will not come into direct contact with the child, the child may be exposed to substances that migrate from the padding materials.

Requirements R29-R33 apply to padding materials.

All the requirements applicable to padding materials in the consultative document (except the requirements applicable to fragrances) have been taken from the European Flower criteria for mattresses. The background is described in "LCA and criteria proposals final report for the EC Report number: R3535924.W05/EJD". The polyester requirements have been taken from the Flower textile criteria.

It has been decided that the focus of the criteria should initially be the content of formaldehyde, antimony in polyester and, if applicable, any colourants and fragrance substances added. These requirements must be fulfilled even if the padding material makes up only a small part of the toy. This is justified on the grounds that these chemicals will be present in the toy and may, in some cases, migrate.

In addition, there is a requirement applicable to the blowing agents used in the production of padding materials. Traditionally, ozone depleting substances have been used as blowing agents.

The background to the fragrance requirement is described in Chapter 4.9.

As a general rule, the use of colourants in padding materials is prohibited. An exemption may be granted from this requirement if the dyeing of padding materials is used in controlling production units during the production process itself. Any colourants that are used for this purpose must fulfil the requirements applicable to colourants in R13-R16.

## **4.5 WOOD AND WOOD-BASED MATERIALS**

Wood and/or wood-based materials may be present in toys in varying quantities. There are traditional wooden toys, untreated or surface-treated, where wood constitutes the only material in the toy. Wood-based materials also occur in toys made up of different materials.

Requirements R34-R36 apply to wood, while requirements R37-R44 apply to wood-based materials.

The requirements have been compiled on the basis of "The Swan-labelling of durable wood", "The Swan-labelling of furniture and fitments", "The Swan-labelling of outdoor furniture and playground equipment", the EU Toys Directive and information compiled from alliances. There are benefits in coordinating the requirements with the requirements applicable to similar materials in other sets of criteria. This will allow the experience garnered from products that have already been approved/certified to be applied in connection with the ecolabelling of toys.

The requirements are made stricter where the materials at present in a quantity that exceeds 10% of the total weight of the product. The 10% limit has been taken from the criteria for furniture and fitments. This reflects the wish to maintain a focus on those materials that make up the greatest proportion of the product.

### **4.5.1 Wood**

#### **Certified wood**

In recent years all Nordic Ecolabelling's criteria for products incorporating wood have contained the requirement that wooden parts used in the products must derive from certified sustainable forestry operations. This certified wood requirement may help to

increase demand for materials of this type. This in turn may help to ensure that more forestry areas are devoted to sustainable forestry operations.

Some of the current certification schemes (FSC/<sup>28</sup> and PEFC/<sup>29</sup>) guarantee that 70% of all certified wood derives from certified forestry operations. Against this backdrop Nordic Ecolabelling has previously applied a 70% limit in connection with for example the development of criteria for furniture and fitments. Experience has shown that requirements in which a higher percentage of certified wood has been required have proved to be problematical since documentation has created difficulties.

A requirement that 70% of wood should derive from certified forestry operations would be excessively strict in the first generation of the criteria for toys. Our contact with various manufacturers of wooden toys has revealed that the proportion of certified wood used is somewhere between 30 and 40%. Accordingly a 40% certified wood requirement applies to Swan-labelled toys.

#### Traceability

Requirements applicable to information on wood types, country of origin and a declaration that the wood does not derive from forest environments that need protection for biological and/or social reasons supplement the certification requirement. The background to this is to ensure that the 60% of the wood that the certification requirement does not guarantee is also controlled.

#### Treatment/impregnation/modification of wood

The use of biocides may result in resistance in micro organisms. Accordingly Nordic Ecolabelling wishes to limit the use of pesticides. International agreements already contain prohibitions against a number of these chemicals.

The requirement applicable to chemicals used for the treatment/modification/impregnation of toys harmonises with the requirements in the criteria for the Swan-labelling of durable wood. The requirement is stricter than the requirements contained in the Swan-labelling of outdoor furniture and playground equipment since there are now manufacturers that fulfil the requirements applicable to durable wood. At the same time, toys can be moved indoors, a factor that reduces the need to treat the wood.

### **4.5.2 Wood-based panels**

Nordic Ecolabelling has developed criteria for building-panels and for furniture and fitments. The requirements applicable to wood-based panels in the criteria for toys have been harmonised with the requirements in these earlier criteria documents. To simplify the requirements, the requirements applicable to energy and emissions to water in the criteria for building panels have been omitted. At the same time, however, Nordic Ecolabelling wishes to maintain a focus on chemicals given that these products are intended for children.

The main areas of focus for wood-based materials are:

- certified wood/traceability

- the content of formaldehyde in the panel
- the presence of substances harmful to health and the environment in chemical products

#### Certified wood/traceability

As well as virgin raw materials, wood-based panels may contain sawdust/wood shavings and/or off-cuts from sawmills and/or untreated wood from demolished structures and/or recycled fibres. Nordic Ecolabelling wishes to encourage the use of wood fibres that would otherwise be incinerated and/or disposed of in landfill sites.

The requirement applicable to the proportion of certified wood is determined on the basis of the following formula:

Requirement applicable to certified wood (%) =  $- 0.6X + 30$

where X = the proportion of sawdust/wood shavings and/or off-cuts from sawmills and/or untreated wood from demolished structures and/or recycled fibres.

This entails that the requirements as to certified wood will cease to apply if  $X \geq 50$ . If the product consists exclusively of virgin materials, the required proportion of certified wood will be 30%.

The remaining 70% is encompassed by the traceability requirement, in the same way as in the case of wood.

#### Formaldehyde

Wood-based materials may in some cases contain large quantities of formaldehyde. A number of classification systems exist for labelling panels on the basis of their formaldehyde content. These include the Danish and Norwegian indoor climate labelling schemes, the Finnish classification system "Emission Classification of Building Materials", Dansk Pladekontrol klasse E1 and the Swedish P-Labeling Scheme. The requirement applicable to the content of formaldehyde in wood-based panels harmonises with all these classification systems and will accordingly be readily documentable.

#### Chemical requirements

Some uncertainty still attaches to what chemicals may be present in a wood-based panel. Although halogenated organic binding agents, halogenated organic flame-retardants, polychlorinated biphenols, alcyphenols, phthalates, aziridine and polyaziridines and pigments as additives based on lead, tin, chromium VI and mercury and their compounds can rarely be traced in wood-based panels, a catch-all requirement relating to these undesired chemicals has been put in place to ensure that Nordic Ecolabelling can be certain that these substances will not be present in the chemical products. This is of particular importance in the case of substances used in products intended for children.

The requirements applicable to substances harmful to health and the environment in chemical products have been taken from the criteria for the Swan-labelling of furniture and fitments.

### **4.5.3 Surface treatment of wood and wood-based materials**

Many wooden toys are treated with paint or varnish (or both). Requirements R45-R48 encompass requirements applicable to chemicals used for the surface treatment of wood and wood-based products.

Generally speaking, there are three methods of varnishing toys: water-based varnish, acid-curing varnish and polyurethane varnish (PU varnish). UV varnish is not suitable for use on toys since it is difficult to cure varnish on uneven surfaces<sup>30</sup>.

Imposing a requirement that permitted only water-based varnish would not be consistent with the quality requirements made of toys. Some toy manufacturers have found that where water-based varnish is used, parts of the varnish may flake off and small children may put these flakes in their mouths.

Acid-curing varnishes and PU varnishes both contain large quantities of solvents, including aromatic solvents. This is problematical, not only in terms of the personnel who varnish the toys, but also because children may be exposed to evaporation of these substances from new toys.

The varnish requirements will impose a maximum permitted content of aromatic solvents.

An alternative to this requirement would be to perform a chamber test (48 hours) with a subsequent GC-MS analysis to measure the content of TVOC. If it can be shown that TVOC lies below the specified limit of 1200µg/m<sup>2</sup> of air, the requirement will have been fulfilled.

### **4.5.4 Board and paper**

In some toys paper and board make up part of the product, while in other toys paper and cardboard make up the entire product (for example jigsaw puzzles).

Requirement R49 relates to paper and board that makes up more than 10% by weight of the toy.

Since the outset in 1990, Nordic Ecolabelling has been drafting and imposing health and environmental requirements on paper and board. Numerous manufacturers now meet the requirements applicable to the ecolabelling of paper and board. The requirement have therefore been imposed that paper and board used in toys must fulfil the ecolabelling requirements (the Swan Label or the EU Flower).

For the background to the board and paper requirements, see "Background to the basic module and chemical module, 16 September 3003".

#### **4.5.5 Printed matter**

Like paper and board, printed matter has long been a priority area for Nordic Ecolabelling. A large number of printers, in both the Nordic countries and elsewhere in Europe, are licensed to produce Swan-labelled printed matter.

Requirement R50 accordingly specifies that printed matter used in toys must fulfil the ecolabelling requirements.

For the background to the requirements applicable to printers, see "Background document for the ecolabelling of printing companies, version 4".

### **4.6 METALS**

Although there are toys on the market that consists solely of metal, in most products metal makes up only a small proportion of the materials. Aluminium and steel are the most widely used metals.

Metals are not a renewable resource, although metals can be readily recycled. Metals are extracted in mining operations, and although there is both relevance and potential for the imposition of health and environmental requirements on the extraction of metals, controllability is absent.

In the case of metals it will be important to focus on coatings and surface treatments on metal parts that will come into direct contact with the child. Requirement R51 relates to the coating of metals and requirements R52-R54 relate to the surface treatment of metals.

Nordic Ecolabelling's criteria for furniture impose the requirement that a certain proportion of the metals used in the furniture must derive from recycled metal. No such requirement will be imposed in the toy document since it is thought that the burden of documentation will be excessively great in relation to the potential environmental benefits. Furthermore, generally speaking, the proportion of metal in toys is less than the proportion of metals in furniture.

With a view to promoting the opportunities for recycling metals, other documents focus on the scope for separating metals from other materials in the product without the use of special tools. This is not a relevant requirement in the case of toys since safety is important and the presence of metal parts that are readily separable from other materials in the toy could represent a hazard to the child.

#### **4.6.1 Coatings**

Requirements are imposed on coatings on visible metal parts, but small parts such as screws are exempted from the requirements. The purpose of the requirement is to exclude the use of those substances that are most harmful to health and the environment and the requirement will initially exclude the use of metals that are coated with chromium, nickel and/or cadmium.

Nevertheless, chromium, nicked and/or cadmium coatings may still be used on metal parts that will be exposed to heavy physical wear and tear. The requirement imposes strict requirements as to Cr, Ni and Cd and in order to achieve these levels processes that use trivalent chromium only may be used (not hexavalent chromium).

**FACTS**

- Chromium, nickel and cadmium are metals are frequently used as coatings on other metals in order to provide increased resistance to wear.
- Cr(III) is classified as mildly acutely toxic and potentially carcinogenic. In some environments Cr(III) may also oxidise to Cr(VI).
- Cr(VI) is classified as highly acutely toxic and is carcinogenic.
- Nickel is problematical because of contact allergies.
- Cadmium is carcinogenic.

<http://www.dep.no/oed/html/rapporter/08/>

#### **4.6.2 Surface treatment**

If they are visible parts, small parts such as screws and hinges are covered by the surface treatment requirement.

The purpose of the surface treatment requirement is to exclude the use of those substances that are most harmful to health and the environment. Requirements are therefore imposed as to the classification of the chemical products that are used.

### **4.7 ELECTRIC TOYS**

Electric toys are becoming increasingly common and the selection available for children aged 0-3 years is expanding. Toys that produce light and sound are marketed to the age group 0-3 years as stimulating toys (stimulate the senses of small children). These toys often contain plastics, textile and padding materials.

In addition there are many traditional electric toys on the market that are more suited to children aged over 3 years. Examples of toys of this type include electric cars and trains.

Electric toys can contain any type of material. Accordingly, electric toys will have to fulfil all relevant material requirements (provided in R2-R54). In addition, R55-R61 contain requirements as to various components of electric toys.

#### Heavy metals

Materials (plastics and metal), including flux must not contain lead, mercury, cadmium or chromium (VI) in accordance with EU Directive 2002/95/EC (RoHS, restriction on use of certain hazardous substances). The ecolabelling requirements will not be stricter than the RoHS Directive. The RoHS Directive has not been universally implemented, including in China, but the requirements must be met in the case of products that are to be sold on the European market.

#### Circuit boards, microprocessors and motors

Chemicals containing substances that are regulated under the Montreal Protocol must not be used in the end production of motors or in the production of circuit boards. These substances are CFC, HCFC, 1.1.1 trichloroethane and carbon tetrachloride. The substances are used for degreasing circuit boards to ensure that the solder adheres. Water/soap-based washing processes have been developed for use on circuit boards.

Halogenated flame retardants must not be present in circuit boards, microprocessors and motors or in varnish used for the surface treatment thereof. Studies have shown that brominated flame retardants in electrical and electronic products account for some two-thirds of total consumption (mapping conducted by the Norwegian Pollution Control Authority (SFT) during the period July to December 2002). As has already been noted, this type of halogenated compound can have negative effects on health and the environment.

Circuit boards are lacquered to prevent short circuits. The lacquer used for this purpose may (in addition to halogenated flame retardants) contain other substances that are harmful to health and the environment, such as various solvents and bisphenol-A. However, imposing requirements on varnish in this version of the criteria would be excessive.

#### Light sources<sup>31/32</sup>

Electric toys may contain light sources. Various light sources are in use.

Ordinary incandescent lamps may be used. No requirements are imposed with respect to this type of light source. The tungsten (W) filament is not regarded as harmful to health and the environment. Halogen bulbs may also be used. These bulbs contain tungsten metal and bromine vapour. The bromine vapour has no environmental effects since it reacts and forms inert salts. However, in theory it may be harmful in the event of direct contact. Even so, the chances of these are considered to be so low that the use of halogen bulbs will not be prohibited.

Light Emitting Diodes (LED) are the other light source used widely in toys. These consist of semiconductors that are in practice built of silicon oxide doped with various compounds. The table below details the most common compounds used for this purpose:

Table 4: List of compounds used for doping silicon oxide<sup>33/34</sup>:

Name	Colour of light	Effect on health and environment
Gallium arsenide	Red/IR (TV remote controls)	Testicular toxicity, reduced motility and concentration of sperm cells <sup>1</sup>
Gallium phosphide	Green	None described
Gallium indium phosphide	Orange, red, yellow, green	Carcinogenic in animal experiments <sup>2</sup>
Gallium arsenide phosphide	Red, orange, yellow	None described, but probably same as for gallium arsenide
Gallium nitride	Green, blue	None described
Silicon carbide	Blue	None
Silicon (unfinished)	Blue	None
Sapphire (aluminium oxide)	Blue	None
Zinc selenide	Blue	Terratogen
Diamond (carbon)	UV	None
Aluminium nitride	Blue/UV	None

To prevent the use of the most harmful compounds the criteria will prohibit the use in LED production of chemical products that are classified as carcinogenic (R45, R49, R40), harmful for reproduction (R46, R40), genetically harmful (R60, R61 R62, R63), toxic (R23-R28) in accordance with the regulations on the classification and labelling of hazardous chemicals in force in any Nordic countries and/or the EU classification system 1999/45/EEC (with adaptations and amendments).

Work is under way to develop organic doping chemical for LEDs. However, as far as we are aware none of these are yet available on the market.

#### Push switches/rocker switches

Traditionally push switches and rocker switches have been based on the use of a drop of mercury in a tube. The use of switches of this type in Swan-labelled toys is not permitted.

An activation mechanism has recently been developed in which a small spiral spring is fitted inside a cylinder. When as a result of movement the spring touches the cylinder, the electrical circuit is completed and the electronics are activated.

#### Batteries

Some electric toys contain disposable batteries that cannot be replaced. These toys will not qualify for a Swan Label since the useful life of the product will be severely limited.

<sup>1</sup> Omura et. al. Fundamental and Applied Tox. Vol 32, no 1 1996. p 72-78.

<sup>2</sup> Technical Report Series 499 (2001) NIH Publ. 01-4433 US Dept. of Health and Human Services, National Institute of Health Sciences. p 8-10.

Nordic Ecolabelling has for many years been working on environmental requirements for batteries and many international battery manufacturers produce Swan-labelled batteries. For this reason the requirement is imposed that batteries fitted in the product at the time of sale must be Swan-labelled batteries (alternatively documentation must be provided that the environmental requirements applicable to batteries have been fulfilled). The background to the requirements is provided in "Background document rechargeable batteries/battery chargers 2003-04-02".

#### **4.8 ADHESIVES**

Adhesives are used in a variety of different types of toys, either to glue different materials together or in the production of a material (e.g. building panels). The adhesive requirements are taken from Nordic Ecolabelling's criteria document for adhesives and apply solely to adhesives used to glue various materials/parts of the toy together.

Requirements R62-R65 apply to adhesives, with the exception of adhesives used in building panels. These are encompassed by requirements R41-R44.

For the background to the requirements applicable to adhesives, see "Nordic Ecolabelling of adhesives. Background document for version 3.0, 28 November 2002".

#### **4.9 FRAGRANCE**

A number of toys contain fragrance both to make them attractive to children and in some cases to conceal smells generated by the ingoing materials.

Nordic Ecolabelling imposes requirements on fragrances used in a wide range of products that are intended to come into direct contact with the consumer. The background to this is that many of these substances are known to cause allergies.

Requirement R66 encompasses fragrances added to the end product. Requirements R9, R11 and R31 apply to fragrances added to various ingoing materials.

Generally, fragrances must not be used in toys that are intended for children under the age of 3.

A study conducted by the Danish EPA found that 18 of the 26 substances on the EU list of allergenic substances were present in the studied toys. Phthalates (particularly DEHP), organic solvents and a flame retardant were also found<sup>35</sup>.

Toys contain a wide variety of chemical compounds. Some of these substances may migrate if they come into contact with mucous membranes and the digestive systems (the child chews the toy), skin (the child touches the toy) or the respiratory passages (the child sniffs the toy).

Fragrances migrate readily because they are by definition volatile. Thus they come into contact with the respiratory passages and, accordingly, the skin and, if the child chews on the toy, with mucous membranes and the digestive system. Fragrances catch the attention of the child and may stimulate the child's curiosity in the toy and a wish to make close contact with the toy.

The use of fragrances in toys is not essential. There is an increasing tendency to add fragrance to products of all types, as a result of which the child's overall exposure to chemicals increases. What effect this will have on children is not known. We know that during the course of their lives a very high proportion of the population will develop asthma, allergies and other sensitivity reactions.

Consequently it is appropriate to focus on the use of fragrances in toys and to examine various methods of exposure (skin, respiratory passages, digestive system).

#### Allergenic fragrance substances

Using various methods including Patch testing, the EU's Scientific Committee for Cosmetic Products and Non-Food Products intended for consumers (SSCNFP), now known as the SCCP: The Scientific Committee for Consumer Products/<sup>36</sup>) has drawn up a list of 26 substances that have a particularly high potential for releasing allergenic reactions. This does not mean that these compounds have a sensitising effect, i.e. create allergic reactions in persons who were previously not allergic. The list has been subject to a great deal of criticism because it contains substances with widely varying allergenic properties. Thus the highly reputed Øko-test institute in Germany has found it necessary to distinguish between the substances on the grounds of their potential for unfortunate reactions. Other sources maintain that many of these substances will only produce unfortunate reactions in isolation, whereas the reactions are far lower or non-existent when they occur in a matrix, i.e. together with other substances that they belong together with.

Nevertheless, the SCCP has not yet concluded that it is necessary to revise the list or to differentiate its advice with regard to the 26 substances. When used in cosmetic products in quantities in excess of 0.01% (individually) of the product, the substances must be declared on the label to allow allergics and other hypersensitive persons to avoid products that create problems for them.

These 26 substances are not the only allergenic substances found in perfumes. Other fragrance substances have not been included amongst the selected substances, for example because they are less widely used and are accordingly not tested. The classification R42 (May cause sensitisation by inhalation) is particularly appropriate to fragrance substances. However, R43 (May cause sensitisation by skin contact) is also pertinent. Substances of this type have been shown to have allergenic properties and should for precautionary reasons not be permitted in toys.

#### Nitromusk compounds:

Musk xylene (MX), musk ketone (MK) and musk moskene (MM) are the most common nitromusk compounds. Musk ambrette (MA) and musk tibetine (MT) also occur frequently. For health reasons, the use of musk ambrette, musk tibetine and

musk moskene in cosmetic products is prohibited under the Cosmetics Directive<sup>37</sup>, whereas musk xylene and musk ketone are permitted in limited quantities.

Musk xylene is classified as carcinogenic (may cause cancer). It has been proposed that musk ketone should be classified as carcinogenic (may cause cancer). There are indications that metabolites that occur when musk xylene and musk ketone break down cause endocrine disruption. These substances have been found in fatty tissue and breast milk.

Musk xylene is classified as environmentally harmful, i.e. the substance is highly toxic to waterborne organisms and may cause undesired long-term effects in the aquatic environment. Musk xylene is highly bioaccumulable and non-readily degradable in the environment.

It has been proposed that musk ketone should be classified as environmentally harmful, i.e. that the substance is highly toxic to waterborne organisms and may cause undesired long-term effects in the aquatic environment.

#### Polycyclical musk compounds

Polycyclical musk compounds are used in far greater quantities (4,000 tonnes per year) than nitromusk compounds (200 tonnes per year). HHCB and AHTN are the most common polycyclical musk compounds. They have been found in human blood, fatty tissue and breast milk. They are also suspected of causing endocrine disruption.

The EU is in the process of conducting a risk assessment of polycyclical musk compounds (galaxodide, tonalide). It has been proposed that galaxolide and tonalide should be classified as harmful to the environment.

## **4.10 SAFETY REQUIREMENTS**

Each year in the European Union 350,000 children aged under five are injured as a result of using child products such as bathinettes, children's chairs and toys. Work is under way within the EU member states to make children's toys safer and an EU directive requires EU member states to compile European standards for the applicable products.

All toys on sale in Europe must carry the European CE label. Ecolabelling can supplement but not replace the CE safety requirements. Swan-labelling will assure consumers that the toy has been tested in accordance with the standards and requirements of the CE label. It is important however that ecolabelling should not be responsible for "approving" products and assessing whether the proper safety tests have been performed. Here we must look to independent test institutions.

According to the Swedish Consumer Agency the most serious accident risks associated with toys are that small children will swallow something that gets caught in their throat and that children damage their eyes or hearing. Although toys can harm their users in various ways, safe toys must not harm their users as a result of their design. Toys must not be designed in such a way that they pose a risk to the health and safety of the user or other persons.

The EU Toy Directive specifies the safety requirements that must be met by toys. The requirements in the EU Directive cover areas such as mechanical and physical properties, flammability, migration of heavy metals, noise levels. Some toys must also carry warning labels or age labels, since toys designed for older children may be dangerous for smaller children.

Where a toy carries a CE label, the manufacturer guarantees that the toy fulfils the requirements of the EU Toy Directive. However, according to the Swedish Consumer Agency, CE-labelled toys cannot be trusted since cheating occurs with this labelling scheme.

R67 is intended to ensure that cheating of this type does not occur since checks will be performed to ensure that EN71 testing is in fact performed.

#### **4.11 PACKAGING AND INFORMATION FOR THE CONSUMER**

Requirements R68 and R69 cover packaging and information for the customer.

Toys are often packaged in a great deal of packaging, both cardboard and plastic. This is in part intended to ensure that the products are able to withstand transportation. However, packaging is also designed with a view to tempting customers.

Several of Nordic Ecolabelling's criteria prohibit double and triple packaging. In the case of toys, the first generation of criteria will not impose requirements on the quantity of packaging, although this will be discussed when the criteria are revised at a later date.

However, the use of PVC in the packaging will be prohibited (see the discussion on PVC in Chapter 4.2.1).

In the case of electric toys there will also be a requirement that customers must be informed about the way in which used batteries should be handled, the duration of the guarantee and of recycling systems for electric toys. In addition the use of Swan-labelled batteries must be recommended. This information may be shown on the packaging or attached as information material.

#### **4.12 WORKING CONDITIONS**

Requirements R70-R79 apply to quality and the requirements laid down by the authorities. Requirements R71-R79 are general requirements that are incorporated in all Nordic Ecolabelling's criteria documents. R70 has been specially adapted to toy production.

The ethical issues relating to toy production are numerous and difficult. They include subjects such as the working conditions in the production premises and the pedagogical effects of the toy on the child. The ethical requirements in the first generation of the criteria generally focus on the rights and working conditions of

production workers. Other issues such as the rights of indigenous populations and animal testing are not covered.

One trend in the toy industry has been that delivery times for products are gradually becoming shorter. Because of the costs involved, buyers do not wish to keep extensive stocks of products. This increases the pressure on the manufacturer to deliver the goods at short notice. Moreover, we are also seeing that the price of toys is stagnating and in some cases falling. At the same time, the cost of raw materials such as plastics, steel and cotton are increasing. This increases the pressure on the manufacturers, and there is a constant battle to find the cheapest areas in which to manufacture. One precondition for cheap production will often be cheap labour. Since we know that suppliers do not wish to increase their prices to end users, the manufacturers are the ones who suffer.

### **Workshop**

On 20 March 2006 a workshop on ethics was held at which ethical guidelines for toy manufacturers were discussed. The goal of the workshop was to generate ideas and a debate on the subject of the ethical problems associated with toy production in China. 20 people attended the workshop (see the programme and list of participants in Appendix 3). Henrik Lindholm of Fair Trade in Sweden presented his organisation's work on reporting and improving working conditions in the toy industry. A film was shown: "Report from Father Christmas' workshop" which was produced in collaboration with Swed Watch and Hong Kong Christians Industrial Committee (HKCIC), a voluntary organisation that has extensive experience of investigating working conditions in South China. Film was shot at several of the production sites of major Nordic manufacturers/importers such as BRIO, COOP, Åhlens and Top Toy. A report from the study entitled "Billig, snabb og lydige" (Cheap, fast and obedient) has also been published.

In his talk Henrik Lindholm summarised Fair Trade's work. He also offered Nordic Ecolabelling tips and advice on how ethical requirements might be imposed in our criteria document. He stressed that it is not possible to guarantee that ethical guidelines will be followed.

The next speaker, Christian Ewert, of ICTI (see Chapter x) outlined the background to ICTI's Care Process. ICTI has for several years been working on improving the working conditions of workers employed by toy manufacturers in China. The area of the ICTI programme that elicited the most comments from other participants at the workshop was the subject of working hours. A further ICTI requirement is that there should be a right to unionisation only in those countries in which this does not breach the requirements of the authorities.

The workshop closed with the discussion of the scope that exists for imposing ethical requirements in the criteria document for toys. The representatives of the various organisations indicated that it is their view that it is praiseworthy for Nordic Ecolabelling to involve itself in this important area, but that we face many challenges. Ecolabelling can provide no guarantee of good working conditions.

## Standards

Studies have revealed a number of aspects of the working conditions at production facilities - primarily in non-Western countries - that contravene Western views on what is regarded as acceptable. Some of these are so serious that even fundamental human rights are under threat.

Against this background a number of standards for social responsibility have been introduced. In the toy industry two standards dominate:

- a. The ICTI Code of Business Practices (ICTI CARE), the industry's own standard (at present applies only to China)<sup>5</sup>.
- b. Social Accountability 8000 (SA8000). A worldwide scheme<sup>38</sup>.

## The penetration of the standards

At present, there are 763 SA8000 certified production facilities in 47 different countries and 54 different industries. There are 15 SA8000 certified toy manufacturers in China. These have been certified by Det Norske Veritas.

To date, 100 factories have received the ICTI CARE Seal of Compliance. Only one-third of the approved firms want their names published on ICTI CARE's website, but ICTI is working to increase this figure.

## The levels of the standards:

SA8000:

SA 8000 certification has two different levels: SA8000 certification or SA8000 Corporate Involvement Program (CIP). SA8000 certification is available to factories that engage in production, whereas firms that sell goods or combine sales and production may participate in the CIP programme.

CIP has two levels:

- SA8000 Explorer (CIP level 1):  
The firm evaluates SA8000 as an ethical sourcing tool via pilot audits.
- SA8000 Signatory (CIP level 2):  
The firm is implemented over time in some or all of the supply chain. The firm communicates implementation process to stakeholders via SAI-verified public reporting.

ICTI Care Process:

ICTI Care Process has two levels. One is standard certification (ICTI CARE Seal of Compliance).

The other level is the Date Certain programme. Firms that participate in this programme undertake to:

- specify the date on which they will formally start to involve their suppliers in the CARE process.

- specify the date from which products will be ordered or accepted only if manufactured in factories certified in accordance with CARE.

Date Certain appears to be comparable with the CIP SA8000 programme.

### **The content of the standards**

The standards specify the requirements that companies must meet and also provide a description of the verification requirements. Verification is by neutral third party certification bodies. The certification bodies must fulfil a number of requirements and be approved ICTI/SA 8000 at central level.

The standards contain requirements relating to:

1. Prohibition against child labour.
2. Prohibition against slave labour and the use of prison labour.
3. Health and safety requirements.
4. Freedom to unionise and collective bargaining.
5. Discrimination.
6. Disciplinary practice (punishment).
7. Working hours.
8. Pay.
9. Management systems.

On the whole, ICTI requires local legislation to be followed, although in some cases absolute requirements are laid down such as a minimum age of 14.

SA 8000 specifies a maximum working week of 48 hours and 12 hours overtime per week. ICTI specifies only that local laws must be followed, and where no such laws exist working conditions must be humane, safe and productive.

SA 8000 requires that workers should as a minimum receive the statutory minimum wage or the minimum wage applied in the industry. In addition, however, the pay received in a normal working week must be sufficient to meet basic needs as well as a small surplus.

ICTI gives workers the right to unionise in accordance with local laws. SA 8000 specifies that workers have the right to form trade unions and to bargain collectively. It is also specified that in countries where such rights are limited the company must facilitate alternative means for the workers to unionise and negotiate in a free and independent way.

### **Working conditions**

Chapter 5, 01, of the consultative proposal, contains requirements applicable to working conditions. Under this requirement the licenceholder must ensure that the production of the toy (the end product) is conducted in accordance with a standard or official requirement that is based on the ILO's convention on child labour, forced labour, health and safety, freedom to organise and the right to collective bargaining, discrimination, discipline, working hours and pay.

Nordic Ecolabelling does not wish to set qualitative requirements and requirement levels for working conditions, but will base itself on documentation reflecting the requirements of the authorities in the country of production or the manufacturer's certification under existing standards. Accordingly the working conditions requirement may be documented by means of one of the following alternatives:

- a. By means of a description of the official requirements applicable in the country of production and a statement from the regulatory authorities confirming that the requirements are being met,

or

- b. By means of SA8000 certification with the submission of a valid certificate,

or

- c. Code of Business Practice in accordance with ICTI's CARE Process (valid Seal of Compliance as published on the ICTI website).

So as not to exclude manufacturers in the process of obtaining SA8000 certification or Seal of Compliance a licence may in some cases be granted subject to certain conditions. In such cases, the last report issued by the certification body will be assessed on the basis of the amount of work that remains to be done before a licence can be granted and the areas that deviate from the standard. In addition, substantive action plans with specified time limits will be required to be submitted.

The licence may be revoked if the licenceholder no longer fulfils the requirements specified by SA8000, Seal of Compliance, or fail to follow the time limits specified in action plans, where applicable.

## **5 New criteria**

The ecolabelling requirements for toys will remain in force for approximately four years. Revision of the criteria will take place during the validity period and a new version will be published one year before the existing criteria expire.

During the revision process the stringency of the requirements in version 1 will be assessed, and the possibility of imposing requirements in new areas will be considered. Some of the points that will be considered during the revision process are:

- Requirements applicable to raw material production (plastic, metal etc.)
- Energy requirements

## 6 References

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<sup>1</sup> Some examples:

Miljøjournalen Nr 12, 2005, Tænk Mars 2006, VG torsdag 6. juli 2006,

<http://www.nrk.no/programmer/tv/fbi/1399966>

<sup>2</sup> <http://www.sft.no/arbeidsomr/produkter/norge/dbafile7539.html>

<sup>3</sup> <http://www.tietoy.org/Portals/28/TIE%20Facts%20and%20Figures%20brochure%202006.pdf>

<sup>4</sup> <http://www.tietoy.org>

<sup>5</sup> <http://www.toy-icti.org>

<sup>6</sup> <http://www.dep.no/md/norsk/miljolov/>

<sup>7</sup> <http://www.calidadcomprobada.com/>

<sup>8</sup> <http://www.wwf.no>

<sup>9</sup> <http://www.btha.co.uk/>

<sup>10</sup> EU-Blomsten: [http://ec.europa.eu/environment/ecolabel/index\\_en.htm](http://ec.europa.eu/environment/ecolabel/index_en.htm) Økotex:

<http://www.oekotex.com/en/start/start.html> Bra Miljøval: <http://www.snf.se/>

<sup>11</sup> FFFH's krav til A,B,C og D-mærkede formnings- og hobbymaterialer,

Modellervoks, støbemasse, ler, gibs og gibsgaze

<sup>12</sup> Nordisk Miljømerkings Riktlinjer för plaster, *Huvudrapport*, May 2001, Version

1)

<sup>13</sup> <http://www.leika.dk>

<sup>14</sup> <http://www.brio.se>

<sup>15</sup> LEGO Annual report 2004

<sup>16</sup> PVC Informationsrådet i Danmark. [www.pvc.dk](http://www.pvc.dk). Hjemmesiden besøgt 22/3-05.

<sup>17</sup> Life Cycle Assessment of PVC and of principal competing materials, EU

Commission 2004.

<sup>18</sup> espa, European Stabiliser Producers Assosiation,

<http://www.stabilisers.org/breakdown.htm>, (nettsiden besøkt 30.03.2005)

<sup>19</sup> Green Paper – Environmental issues of PVC, European Commission 2000.

<sup>20</sup> Towards the establishment of a priority list of substances for further evaluation of their role in endocrine disruption. European Commission DG ENV 2000.

<sup>21</sup> SFT, Høring av forslag til endringsforskrift som skal regulere ftalater i leketøy og småbarnsprodukter. Ref: 2006/410, dato 08.05.2006

<sup>22</sup> <http://www.miljostatus.no>

<sup>23</sup> Migration of nitrosaminer and nitrosatable substances from balloons, Report ND1TOY01/01, Inspectorate for health protection and veterinary public health

<sup>24</sup> N-Nitrosamines from balloons: Assessment of the health risk for Children, Centre for Substances and Integrated Risk Assessment of RIVM, December 2002

<sup>25</sup> FOR 1993-12-21 nr 1381: Forskrift om materialer og gjenstander i kontakt med næringsmidler (matemballasjeforskriften)

<sup>26</sup> [www.fda.gov](http://www.fda.gov)

<sup>27</sup> [http://ec.europa.eu/environment/ecolabel/product/pg\\_clothing\\_textiles\\_en.htm](http://ec.europa.eu/environment/ecolabel/product/pg_clothing_textiles_en.htm)

<sup>28</sup> [www.fsc.org](http://www.fsc.org)

<sup>29</sup> [www.pefc.org](http://www.pefc.org)

<sup>30</sup> Information from BRIO, IKEA, Beckers and Akzo Nobel

<sup>31</sup> Tlf. samtale Osram ved produktsjef.

<sup>32</sup> LED- Wikipeda

<sup>33</sup> Omura et. al. Fundamental and Applied Tox. Vol 32, no 1 1996. p 72-78.

<sup>34</sup> Technical Report Series 499 (2001) NIH Publ. 01-4433 US Dept. of Health and Human Services, National Institute of Health Sciences. p 8-10.

<sup>35</sup> Miljøministeriet, Kortlægning af parfymestoffer i legetøj og småbørnsartikler, Nr 68 2006, Dorte Glensvik COWI A/S, Jane Pors Eurofins Danmark A/S

<sup>36</sup> [http://ec.europa.eu/health/ph\\_risk/committees/04\\_sccp/04\\_sccp\\_en.htm](http://ec.europa.eu/health/ph_risk/committees/04_sccp/04_sccp_en.htm)

<sup>37</sup> Cosmetic directive 76/768/EEC- March 1989

<sup>38</sup> <http://www.sa-intl.org/index.cfm?fuseaction=Page.viewPage&pageId=473>

## **Appendix 1**

### **The following products are not eligible for a Swan Label and are not encompassed by the criteria for toys**

(Equivalent to Annex 1 to EU Directive No. 88/378/EEC):

- Christmas decorations
- Detailed scale models
- Equipment intended to be used collectively in playgrounds
- Sports equipment
- Aquatic equipment intended to be used in deep water
- Folk dolls and decorative dolls and other similar articles for adult collectors
- "Professional" toys installed in public places (shopping centres, stations etc.)
- Puzzles with more than 500 pieces or without picture, intended for specialists
- Air guns and air pistols
- Fireworks, included percussion caps\*
- Slings and catapults
- Sets of darts with metallic points
- Electric ovens, irons or other functional products operated at a nominal voltage exceeding 24 volts
- Products containing heating elements intended for use under the supervision of an adult in a teaching context
- Vehicles with combustion engines
- Toy steam engines
- Bicycles designed for sport or for travel on the public roads
- Video toys that can be connected to a video screen, operated at a nominal voltage exceeding 24 volts
- Babies' dummies
- Faithful reproductions of real fire arms
- Fashion jewellery for children
- Crystal growing sets

\* Percussion caps specifically designated for use in toys are encompassed by the regulation.

## Appendix 2

### Example of completion of form for list of materials and production (Chapter 1 of the criteria)

Manufacturer: <b>LekeKing AS</b>	Contact person: <b>John Doe</b>
Product: <b>Miscellaneous activity and teething toys for babies</b>	Total weight in grams: <b>400 grams</b>

1. Provide a brief description of the type of toy and the age group for which the toy is suited. Describe the various materials and small parts (screws, hinges, knobs etc.)
2. Determine the weight of the toy
3. Separate the toy into its various materials and small parts (screws, hinges, knobs etc.)
4. Determine the weight of the individual materials.
5. Provide an overview of the suppliers of the various materials. Small parts are exempted.
6. Check the total quantities for each individual material in the form below to provide an overview of the relevant requirements.
7. Draft a flow chart to illustrate the production flow, including various suppliers and, where applicable, manufacturers of various parts used in the toy.

**Table 1 Overview of materials and the chapters in which the requirements are specified**

Material	Weight %	Requirement	Quantities in toy	Relevant
Plastic	More than 1 weight %	R2, R3-R5, R7-R9	200 g, 50 weight %	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Rubber	More than 1 weight %	R2, R5- R9		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
PVC	More than 1 weight %	R2, R4, R5, R7-R9		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Recycled plastic	More than 1 weight %	R2, R3-R5, R7-R9		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Textile, general requirements	More than 1 weight %	R10-R19	50 g, 12.5 weight %	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Skin and leather	More than 1 weight %	R28		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Acrylic, special requirements	More than 1 weight %	R20		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Polyester, special requirements	More than 1 weight %	R21	50 g (see above)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Elastane, special requirements	More than 1 weight %	R22		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Cotton, special requirements	More than 50 weight %	R23-R24		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Wool, special requirements	More than 50 weight %	R25-R26		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Colour fastness	More than 50 weight %	R27		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Padding materials	More than 1 weight %	R29-R33	50 g, 12.5 weight %	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Wood	More than 1 weight %	R34 R35-R36	100 g, 25 weight %	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

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<b>Wood-based materials</b>	<b>More than 10 weight %</b>	<b>R37-R44</b>		<b>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></b>
<b>Surface treatment</b>	<b>More than 1 weight %</b>	<b>R45-R48</b>		<b>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></b>
<b>Board and paper</b>	<b>More than 10 weight %</b>	<b>R49</b>		<b>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></b>
<b>Printed matter</b>		<b>R50</b>		<b>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></b>
<b>Metal, coating</b>	<b>Small parts exempted</b>	<b>R51</b>		<b>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></b>
<b>Metal, surface treatment</b>	<b>All metal parts</b>	<b>R52-R54</b>		<b>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></b>
<b>Electric toys, special requirements</b>		<b>R55-R61</b>		<b>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></b>
<b>Adhesive</b>		<b>R62-R65</b>		<b>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></b>
<b>Fragrance</b>		<b>R66</b>		<b>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></b>
<b>Safety</b>		<b>R67</b>		<b>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></b>
<b>Packaging</b>		<b>R68-R69</b>		<b>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></b>

Supplier	Part	Material	Weight in grams	Weight %
1. Plastico (address, contact person and telephone number)	Plastic rings in various colours	PP	200	50
2. Textileco (address, contact person and telephone number)	Textile face with padding	Polyester	50	12.5
3. Paddingco (address, contact person and telephone number)	Padding in textile face	Polyurethane	50	12.5
4. Woodco (address, contact person and telephone number)	Wooden ring on which plastic rings are suspended	Pine	100	25
5. Glueco (address, contact person and telephone number)	Glue between textile and padding	See data sheet	-	-

### **Appendix 3 Workshop programme and list of participants**

#### **Toy production - ethical requirements**

The goal of today's session is to create the basis for setting sensible and documentable requirements for ethical conduct in the production of Swan-labelled toys.

Date: 20 March 2006 10 a.m. to 2 p.m.

Place: Nordic Ecolabelling, Tordenskiolds gate 6 B, Oslo

Chair person: Cathrine K. Elger, Marketing Manager, Nordic Ecolabelling

#### **Programme**

- |         |  |
|---------|--|
| 10 a.m. | Nordic Ecolabelling and ethical requirements - Alvhild Hedstein, Director, Nordic Ecolabelling                                       |
| 10:30   | Cheap, quick and obedient - toy workers and corporate responsibility - Henrik Lindholm, Project Manager Fair Trade Center in Sweden. |
| 11:30   | The International Toy Industry's Ethical Manufacturing Programme - Christian Ewert, Vice President Europe, ICTI CARE Process         |
| 12:00   | Lunch  |
| 12:30   | How can ecolabelling impose sensible and documentable ethical requirements on the production of Swan-labelled toys?                  |

Discussion on the following topics:

#### **Production, working conditions and workers' rights**

- Does scope exist for full openness and traceability in the production history of toys?
- What are unworthy working conditions (pay, child labour, working hours, workers safety)? How strict should the requirements be?
- Who should set the standard for working conditions during production?
- Can we require that toys be produced at companies with organised workers and clear working environment legislation?
- What consequences will the mapping of working conditions have for production workers?

#### **Documentation and control**

- How can we secure credible documentation of working conditions?
- Who should be our contact points? Nordic principals?
- Owners? Anonymous workers? Trade unions? Voluntary organisations?
- Who should check working conditions during production?
- Inspection visits in connection with applications for Swan-labelled licences.
- How can we resolve this?
- Is there any scope for systematic feedback/guarantees?

- 1.45 Summing up and further progress - Lise Kristin Sunsby, Project Manager, Nordic Ecolabelling

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**List of participants Ethics Workshop 20 March 2006**

<b>Name</b>	<b>Organisation</b>
Åke Natt och Dag	COOP Sverige
Henrik Lindholm	Fair Trade Center
Jens Erik Romslo	Norwegian Consumer Ombudsman
Line Andersen	Consumer Council of Norway
Håkon Lindahl	Grønn Hverdag
Christian J Ewert	ICTI CARE
Gunelie Winum	Ethical Trading Initiative - Norway
Jorunn Johanssen	Styremedlem i bransjerådet for leketøy
Pia Anette Gaarder	NorWatch
Morten Halle	SFT
Harald Throne-Holst	SIFO
Mogens Stibolt	Nordic Ecolabelling Secretariat Denmark
Alvhild Hedstein	Ecolabelling Norway
Bjørn Erik Lønn	Ecolabelling Norway
Elisabeth Magnus	Ecolabelling Norway
Jorunn Gran	Ecolabelling Norway
Cathrine K Elger	Ecolabelling Norway
Marte K Halvorsen	Ecolabelling Norway
Lise K Sunsby	Ecolabelling Norway
Anders Moberg	SIS Miljömärkning