

A high-angle, top-down photograph of three young children lying on their stomachs in a large pile of colorful plastic balls. The balls are in shades of red, yellow, green, and blue. The children are looking up at the camera with smiles. Their hands are visible, reaching up towards the camera. The child on the left is a white girl with blonde hair, the child on the right is a white girl with brown hair, and the child in the center is a Black girl with dark curly hair.

Guide

# Children's product safety

Ensuring safe and compliant products through effective quality management

**BONUS APPENDIX!**

Common Children Products  
Safety Standards in the World.



# Table of contents

Introduction	3
The undesirable scenario	4
Identifying challenges in the supply chain	6
Getting it right first time	6
Cost-effective quality assurance	7
Field quality control	7
Value-added on-site production tests	8
Digital intelligence	9
About Eurofins Consumer Products Assurance	10
<i>Bonus appendix: Common Children Products Safety Standards in the World</i>	11

April 2023

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## Introduction

Children are vulnerable to all manner of risks in their daily lives. This is true even for products that are designed specifically for their use, despite the numerous product safety regulations and guidelines that govern their design and production.

Each year in the EU, there are on average 19,000 injuries requiring emergency medical treatment among children up to the age of 14 involving bunk beds, primarily falls, as recorded in the Rapid Alert System for Non-Food Products (RAPEX). In the US, more than 200,000 toy-related injuries required hospital treatment in 2021 alone, according to the Consumer Product Safety Commission (CPSC).

To protect consumers, regional and national product safety bodies randomly review and assess the quality and compliance of goods for sale on the market. The public are also encouraged to report unsafe goods to these bodies for further investigation. When faulty goods sold online and in shops are identified, product recall requests are sent to sellers and the public to warn consumers of the potential dangers.

For any brand, retailer or manufacturer, a product recall is one of the most undesirable scenarios, as these can result in a chain of adverse impacts, including:

- Direct financial loss from the recall action, including costs incurred in the retrieval, replacement or repair of the product and the reimbursement of affected consumers.
- Legal liability and fines from enforcement bodies and/or claims from consumers, in cases of personal injury and property damage.
- Reputational damage, which in today's digital age is often exacerbated by social media.
- A negative impact on share price for publicly listed companies.

## SPECIAL ALERT

### Safety in the online marketplace

A project by CECD called 'online project safety sweep' in 2021 revealed that a staggering 31% of online products inspected across 21 countries carried inadequate product labelling and safety warnings. Another piece of research in 2020, conducted jointly by Euroconsumers, Consumentenbond, Which, Stiftung Warentest and Forbrugerrådet Tænk, found that two thirds of goods sold online were unsafe.

## The undesirable scenario

Injuries and death caused by an item of clothing or a toy might seem like unlikely scenarios, but these are sadly more common than you might think, as can be seen by an examination of product recall data from around the world.

In 2022, there were **293 recalls** issued by the US CPSC, of which **100 (34%)** were for children's products. This is the highest number of recalls of children's products in a single year in the US since 2013.

### CPSC Recalled Products



Wall-mounted basketball set

Detachment of wall-mounted basket goals when in use, resulting in four deaths.



Children's sleep blanket

The weighted sleeping blankets pose a risk of asphyxiation as young children can unzip the blanket and climb inside.



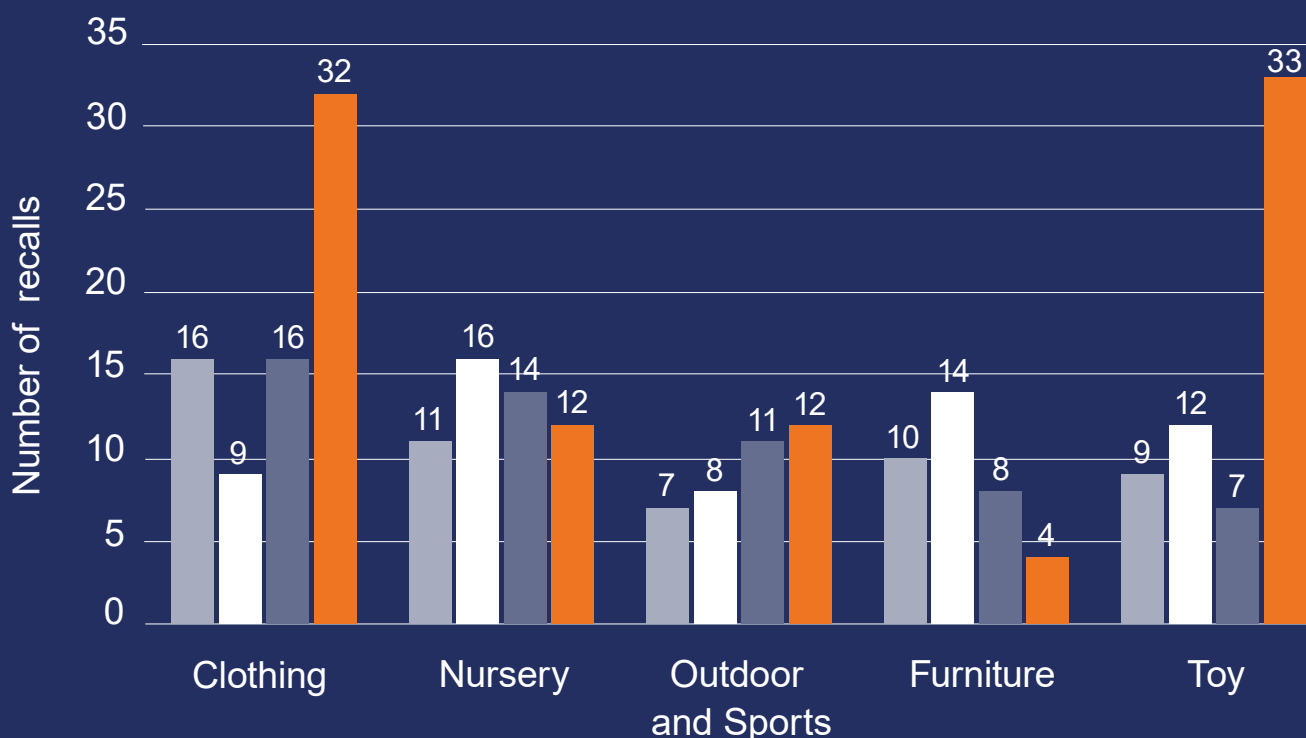
Baby bottles

Hot liquids in the bottle can cause the bumper to shrink, making the bottle tilt and spill its contents, posing a burn hazard.

### Clothing and Toy Product Recall

Increase Significantly in 2022 by US CPSC

■ 2019 ■ 2020 ■ 2021 ■ 2022







According to figures from the CPSC, children's toys were the top category for recalls in 2022 with 33 recalls, closely followed by clothing products with 32 recalls. Hazards ranged from injury and entrapment to violation of federal lead content standards. Similarly, outdoor and sports recalls have gradually increased over the past four years, with 13 recalls issued in 2022.

In the same year, there were more than 570 recalls issued by EU RAPEX in two major categories of children's products: childcare articles and children's equipment, including toys.

In the United Kingdom in 2022, 203 recall cases were recorded in the same product categories by the Office for Product Safety and Standards. And it's a similar story in other major markets, such as China, Japan and South Korea, demonstrating not only the potentially tragic consequences of unsafe products, but also the vigilance of regulatory bodies in checking goods for sale.

## EU RAPEX Recalled Products



Baby rattle toy

Sound pressure level too high, causing potential permanent or partial hearing damage.



Children's mattress

Failure in firmness requirements, causing potential suffocation; zipper puller detached easily, causing potential choking hazard if children put the puller into their mouths; lack of product safety and usage flyer.



Baby swing

Lack of markings and instructions for safe use in the local language.

## Identifying challenges in the supply chain

Sourcing and manufacturing a new item is never an easy task. From initial concept to production of the finished product can take months or even longer and involves many steps. These include sourcing the most appropriate raw materials, finding the right suppliers, deciding on the manufacturing processes, and selecting logistics vendors and quality services providers. Product development is a complex, multiple-stakeholder project, often squeezed by tight budgets and deadlines, and it is not surprising that product safety and quality sometimes fall by the wayside.

Lack of technical and regulatory knowledge is a major reason for product failure in many cases. For example, in the case of the recall of the baby swing by EU RAPEX, the reason for the recall was a failure to comply with the requirement for product markings and consumer safety instructions in the local language of the market where the product was to be sold. This is a fundamental requirement of the EU General Product Safety Directive, if the products are intended for EU market.

Technical, safety and regulatory knowledge is crucial to the development of children's products as the regulatory requirements governing products designed for use by children are more stringent than general consumer goods meant for adults. If regulations are ignored or overlooked, it is likely this will lead to product failures and recalls.

## Getting it right first time

Quality management, which consists of safety and compliance checks throughout the supply chain, is essential for any business involved in the supply or manufacture of goods aimed at children, regardless of product category or business size. And a properly implemented quality management system will deliver significant long-term benefits across all aspects of a business.

More specifically, a quality management system will:



Reduce costs, particularly costs arising from rework and recalls caused by product defects and failure. Identifying faults at the prototype stage or on the production line enables these issues to be fixed before products go on sale to consumer and at a fraction of what it would cost to put them right at a later date. Likewise, robust and appropriate risk assessments of toys and children's goods will help to reduce costs by avoiding risks being designed in at the start of the development process.



Improve manufacturing productivity and efficiency by facilitating clear communication between product design teams, sourcing teams, and suppliers on aligned processes, terminology and expectations to ensure your baby stroller will look the same in the shop as it did in the design sketch.



Lower liability risks by ensuring that risks are identified and managed during the manufacturing process rather than once goods are on sale.



Protect business reputation by avoiding negative headlines, safeguard product quality, and foster consumer trust and loyalty.



## Cost-effective quality assurance

While larger companies might have the resources to implement and manage process improvement in-house, for most companies facing resource pressures, working with a reliable quality assurance provider can be a much more cost-effective solution.

With a third-party services provider, quality is checked and assured before products reach their destination, helping build trust with suppliers by verifying product quality via unbiased assessment. This gives you peace of mind that the children's products you put on the market meet your expectations and the safety requirements of the destination country – and satisfy your customers.

### Field quality control

Final random inspection (FRI), usually carried out when 80% of production is complete, provides a good indication of the quality, conformity, compliance, and other attributes of a product before it is loaded into shipping containers.

However, inspections are most valuable when they are conducted during the production process. Pre-production and random during-production inspections (also known as DuPro) can identify and fix issues at an early stage, avoiding the significant costs associated with repair of faulty goods or, worse, repeating production.

In addition, samples can be picked up during inspection and sent to laboratories for product safety testing directly.



## Value-added on-site production tests

Some of the product recall examples in this white paper could have been prevented by on-site inspection and production tests. Production tests play an important role in assessing the quality of goods in real-life simulations and are a useful complement to the tests carried out in a laboratory environment. These tests also enable buyers to understand the true quality of a production run and manage the associated risks.

Let's take some of the aforementioned product recalls as examples. Here's how simple on-site production tests could have identified the issues that ultimately led to the recall.



In the case of the baby bottle that deformed when filled with hot liquid, the problem could have been identified by filling the bottle with hot water for an agreed timeframe that simulates real-world use, for example, the making of baby formula.



In the case of the children's mattress that was recalled for zipper puller breakage, a pull-strength test carried out on-site that mimicked the pulling action of children would have identified the risk and enabled a fix to be implemented.



Similarly for the wall-mounted basketball hoop, on-site load testing simulating foreseeable use conditions would have revealed the weakness that led to the product detaching from the wall.

Other ways that production tests can be employed to identify potential issues include:



Tensile strength testing of baby clothes to determine if a garment will break and form a loose loop, which is a safety concern.



Floatation testing of swimming floats for children can confirm whether the goods function as intended.



Fatigue testing of any children's product that involve repeated operations, such as the opening and closing of a music box, the folding and unfolding of an inflatable toy, or assembly and dismantling of a high chair, can assess the quality of the manufacturing.



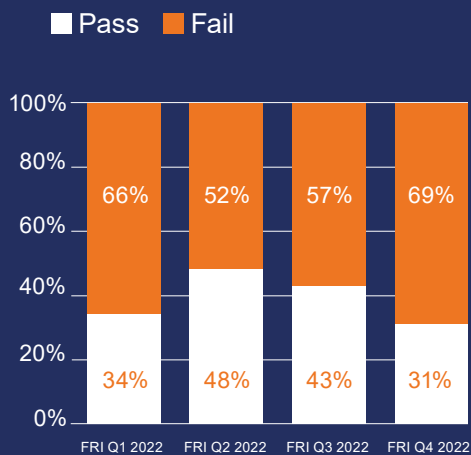
If the above tests cause any small parts or components to detach from a product, a choking hazards test can be conducted to minimise choking risks to children.



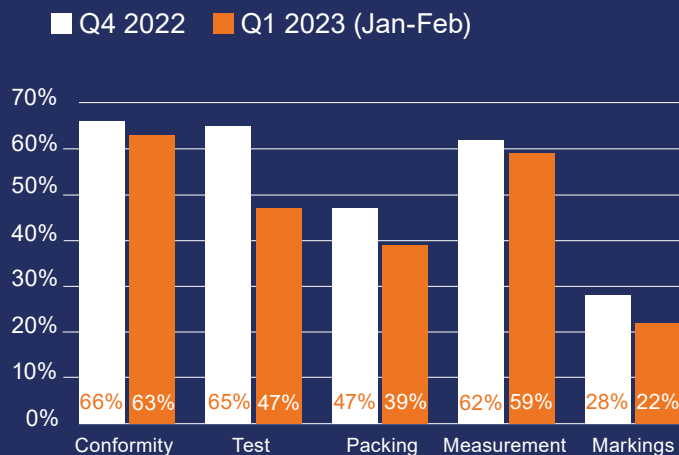
## Digital intelligence

To make quality assurance easier, there are now digital inspection platforms that capture and analyse inspection data by time range, defect type, or supplier. One such platform is Eurofins Assurance Online (EAOL), developed by Eurofins Consumer Products Assurance, which our customers rely on for data intelligence.

**Ratio of Inspection Result by Quarter (Chart 1)**



**Inspection Failure Rate by Parts (Chart 2)**



For example, with just a few clicks you can view pass and fail distribution by quarter (chart 1), or inspection failure by parts (chart 2).

The platform can be customised to customers' inspection programmes, from product categories to report mailing rules, agent/ supplier/ factory lists, and failure criteria. An API connection can also be set up to facilitate instant data exchange with customers' in-house portals. The high level of customisation enables the generation of more precise data, which can be used to guide the continuous improvement in product quality and supplier management.

**Watch the EAOL video!**

See the full potential of the platform at YouTube!



# About Eurofins Consumer Products Assurance

Eurofins Consumer Products Assurance is a quality partner you can count on. Through our network of companies, we have trained inspectors located in manufacturing countries worldwide to run on-site inspection for you. Coupled with the toys and children's product experts from the Eurofins laboratory network, we can not only assess your products from a safety point of view, but also review your quality control protocols to ensure the relevant quality and safety parameters are well covered.

Our expertise and connections provide extra assurance to those children's product sellers, importers, and manufacturers that do not have the quality assurance and compliance capabilities to manage this complex subject in house. Our services can be of particular benefit to small set-ups that sell goods online through their own websites or in virtual marketplaces.



The CPA team is ready to provide a customised solution.

**Reach out anytime!**

## Bonus appendix

### Common Children Products Safety Standards in the World.



### Don't overlook laboratory testing!

Complementing field quality controls, lab testing is an essential aspect of product compliance, testing goods against the requirements of product safety regulations in a controlled environment. In certain countries, certification of toys is a prerequisite for legally placing products onto the markets. (See the appendix for an overview of regulations for toys and children's products, brought to you by Eurofins Toys & Hardlines.)



## Bonus appendix

### Common Children Products Safety Standards in the World.

Category	Product	Europe (Harmonised standards)	US
Toys	Toys	EN 71	16 CFR part 1250 - ASTM F963-17
Cycles	Bicycles for young children	EN ISO 8098	CPSIA/ 16 CFR part 1512 (bicycles) / 16 CFR part 1203 (bicycle helmets)
Children's furniture	Children's cots and folding cots for domestic use	EN 716-1	ASTM F406 16 CFR 1220 ASTM F1169 16 CFR 1219



China	Canada	Japan	Australia	New Zealand
GB 19865-2005	CCPSA	ST 2016 Part 1	Consumer Goods (Aquatic Toys) Safety Standard 2020	Product Safety Standards (Children's Toys) Regulations 2005
GB 26387-2011	SOR/2011-17		AS/NZS ISO 8124.1:2019	
GB 6675.1-2014			ISO 8124-1:2018	AS/NZS ISO 8124.1:2002
GB 6675.2-2014			Consumer Goods (Projectile Toys) Safety Standard 2020	
GB 6675.3-2014			Consumer Goods (Toys Containing Magnets) Safety Standard 2020	
GB 6675.4-2014				
GB 6675.11-2014				
GB 6675.12-2014				
GB 6675.13-2014			AS/NZS ISO 8124.1:2019	
GB 6675.14-2014			EN 71 1:2014 + A1:2018	
			ISO 8124 1:2018	
			ASTM F963 17	
			Consumer Protection Notice No. 14 of 2003	
			AS/NZS ISO 8124.1:2002	
			Consumer Protection Notice No. 1 of 2009	
			AS/NZS 8124.3:2003	
GB 14746-2006	CAN/CSA D113.2-M89	TS mark	Consumer Protection Notice No. 6 of 2004	The Product Safety Standards (Pedal Bicycle) Regulations 2000 (Regulations) sets the safety standard
GB 14747-2006	(Cycling Helmets)	BAA mark	AS/NZS 1927:1998	
		JISD9301/ 9302		
		SG mark		AS/NZS 1927:1998
	SOR/2016-152	CPSA 0023	AS/NZS 2172/ CONSUMER PROTECTION NOTICE No. 6 of 2005	



## Bonus appendix

Category	Product	Europe (Harmonized standards)	US
Children's furniture	Cribs	EN 1130	ASTM F 2194 (bassinet)  ASTM F2906-13 (2019) beside sleepers
Children's furniture	Mattresses for cots and cribs	EN 16890	ASTM F2933/ 16 CFR 1241
Safety of children's clothing	Cords and drawstrings on children's clothing	EN 14682	CPSIA  16 CFR part 1610/ 16 CFR part 1611
Child use and care articles	Baby walking frames	EN 1273	ASTM F977-18
Child use and care articles	Soothers for babies and young children	EN 1400	ASTM F1313-90(2011)
Child use and care articles	Carry cots and stands	EN 1466	ASTM F2194-16e1
Child use and care articles	Safety barriers	EN 1930	ASTM F1004-21
Child use and care articles	Changing units for domestic use	EN 12221-1 and 2	ASTM F2388-18
Child use and care articles	Baby carriers	EN 13209- 1 and 2	ASTM F2549-14a  ASTM F2236-16a44
Child use and care articles	Child seats for cycles	EN 14344	ASTM F1625-00
Child use and care articles	Drinking equipment	EN 14350-1	

China	Canada	Japan	Australia	New Zealand
	SOR/2016-152	CPSA 0023	AS/NZS 2172/CONSUMER PROTECTION NOTICE No. 6 of 2005	
GB 31701-2015	CCPSA	JIS L 4129	<i>All following are voluntary</i>	Consumer Information Standards (Care Labelling) Regulations 2000
GB 20400-2006	SOR/2016-194		AS 1182-1997	AS/NZS 1957:1998
	CAN/CGSB 4.2 No. 27.5		AS 1344-1997	
			AS 1954-1976	Consumer Information Standards (Fibre Content Labelling) Regulations 2000
GB 14749:2006		CPSA 0002	Consumer Protection Notice No. 1 of 2013	AS/NZS 2622:1996
GB 28482: 2012	SOR 2016-184		AS/NZS 2432: 2015	
	SOR 2016-152	CPSA 0106		
	SOR 2016-179	CPSA 0045		
GB/T 35270:2017		CPSA 0027		
		CPSA 0031		
ZWX/QLB 0201: 2014				



## Bonus appendix

Category	Product	Europe (Harmonized standards)	US
Child use and care articles	Children's high chairs	EN 14988	ASTM F404
Child use and care articles	Chair mounted seat	EN 16120	ASTM F2640-18
Child care article	Table mounted chairs	EN 1272	ASTM F1235-18
Child care articles	Bathing aids	EN 17022	ASTM F1967-19 (Bath Seats)  ASTM F3343-20 (infant bathers)
Child care articles	Bath tubs, stands and non-standalone bathing aids	EN 17072	ASTM F2670-18
Child use and care articles	Reclined cradles / Infant swing seats	EN 12790	ASTM F3118-17a (Infant bouncer seats)  ASTM F3084-20 (Toddler rockers)
Child use and care articles	Infant swing	EN 16232	ASTM F2088-21
Child use and care articles	Cutlery and feeding utensils	EN 14372	
Child use and care articles	Soother holder	EN 12586	
Safety of children's clothing	Children's nightwear	EN 14878	CPSIA  16 CFR part 1615/  16 CFR part 1616



Looking for regulations on other product categories or countries?  
Contact **Eurofins Toys & Hardlines** (toys-hardlines@eurofins.com)  
or visit [www.eurofins.com/toys-hardlines/](http://www.eurofins.com/toys-hardlines/) for support!



China	Canada	Japan	Australia	New Zealand
GB 22793.1 & GB/T 22793.2		CPSA 0029	AS 4684	
		CPSA 0096		
			Consumer Goods (Baby bath aids) Safety Standard 2017	
		CPSA 0137		
		CPSA 0137		
GB 31701-2015	CCPSA SOR/2016-169	JIS L 4129	Consumer Protection Notice No. 25 of 2010  AS/NZS 1957:1998  Consumer Goods (Children's Nightwear and Limited Daywear and Paper Patterns for Children's Nightwear) Safety Standard 2017  AS/NZS 1249:2014	Product Safety Standards (Children's Nightwear and Limited Daywear Having Reduced Fire Hazard) Regulations 2016  AS/NZS 1249:2014  Consumer Information Standards (Care Labelling)  Regulations 2000  AS/NZS 1957:1998  Consumer Information Standards (Fibre Content Labelling) Regulations 2000  AS/NZS 2622:1996



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