

Making Toys Safe for Play

Safeguarding your
innovation and success

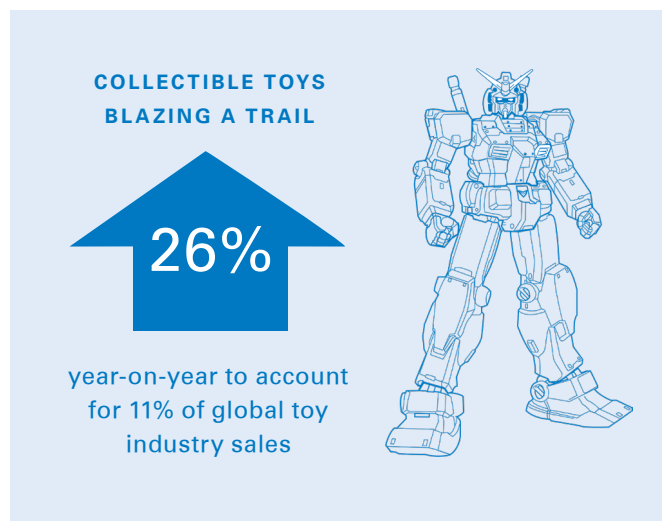


Making safe and successful toys isn't child's play

Ever since the legendary Hula Hoop redefined toy industry success by selling an estimated 100 million units in less than two years, toy makers have been chasing the “next big thing”¹.

Active toys are popular, and so are educational toys that promote “Play with a Purpose.” Classics always appeal, with dolls and plush toy sales in the U.S. rising by 4% and 9% respectively in 2017.

Puzzles and board games are also on a roll, with U.S. sales leaping by 24% in 2016 and 4% in 2017. But, perhaps surprisingly, it is collectibles that have remained closest to the top of the toy box. According to the NPD Group, collectible toys continued to blaze a trail in 2018, increasing by 26% year-on-year to account for 11% of global toy industry sales.



¹ https://en.wikipedia.org/wiki/Hula_hoop

² <https://tinyurl.com/yaw23koo>

³ <https://tinyurl.com/y85tv4br>

EMBRACING EMERGING MARKETS

With sales of US\$27 billion in 2017, the United States is the world's biggest toy market². But, when it comes to exports and potential sales growth, toymakers are increasingly looking to emerging markets.

For example, according to IBISWorld, China is the largest manufacturer and exporter of toy products, producing over 70.0% of the world's total. However, as household incomes increase, Chinese parents are spending more on their children. This has driven domestic toy sales up by 5.3% a year during the five years up to 2017, to reach a total of US\$20.1 billion. India's huge population and explosive growth in middle-class income also bodes well for domestic toy sales.

TECHNOLOGY IS TRANSFORMING TODAY'S TOYS

Technology opens up fantastic possibilities for toymakers willing to think outside the box. Ideas that were science fiction a few years ago can now be affordably integrated into toys at realistic price points. This is driving the development of a new niche - so-called “smart toys” - where the emerging possibilities of the Internet of Things (IoT) and Artificial Intelligence (AI), are opening up tremendous new opportunities.

A recent report from Juniper Research forecasts that Smart Toy sales will grow three-fold by 2022 to reach US\$15.5 billion in hardware and app content revenue, up from an estimated US\$4.9 billion in 2017³. Much of that increase will be driven by the growing popularity of smartphone-based connected toys and the enduring appeal of console-connected “toys to life”, action figures that interact with a video game via a reader device.





Exploring the global toy landscape

The quality and safety of toys and childcare products are crucial to children's health. Parents certainly hope to provide high quality products for their children and eliminate all potential dangers. And, so do governments and trade regulators all over the world. TÜV Rheinland understands this environment intimately and can help you navigate it.



UNITED STATES

The United States is the No.1 target market for toymakers with global ambitions. It is also one of the most regulated, and high safety requirements make exporting products to the US difficult.

The Consumer Product Safety Improvement Act (CPSIA), which was signed into law in 2008, is part of a comprehensive effort by the US government to enhance the safety of US made and imported consumer goods.

The US Consumer Product Safety Commission (CPSC) introduced new third-party testing lab accreditation. Since January 2012, any toy manufactured or imported into the US must be tested to the ASTM F963 by a CPSC approved third-party lab.

MAINLAND CHINA

Mainland China is the world's second largest market for toys. In 2007, the China Compulsory Certification (CCC) scheme was rolled out. It covers

six main types of toys – children's vehicles, battery-operated toys, plastic toys, metal toys, toys with shot projectiles and dolls. They must apply for a CCC certification mark to be sold or used for any commercial purpose on the mainland.

In addition, the General Administration of Quality Supervision, Inspection and Quarantine of China adopted measures for the Inspection, Supervision and Administration of Import and Export Toys in 2009. Exporting, importing or selling defective toys is expressly prohibited and violations are subject to a fine equivalent to three times the value of the goods in question.

JAPAN

Toy safety concerns fall under the aegis of the Japan Toy Association (JTA) - a public interest entity approved by the Ministry of Economy, Trade and Industry. The JTA has been operating the Japan Safety Toy Mark

Program (ST Mark), which is based on standards that address mechanical and physical properties, flammability and chemical properties.

Updated in 2016, new ST Mark's requirements include new definitions for free flight toys, squeeze toys, rattles, fasteners, toys and components, as well as guidelines for projections on bath toys. There were also new requirements for projectile toys and testing methods.

EUROPEAN UNION

The European Union's most recent Toy Safety Directive (Directive 2009/48/EC), which came into effect in mid-2011, was designed to address technological developments and new safety concerns. Complementing existing provisions with regard to warnings on toys and the responsibilities of importers, it also covers physical and mechanical properties, flammability, chemical properties, electrical properties, hygiene and radioactivity.

TÜV Rheinland: Your trusted testing, inspection, certification partner

Compliance with safety standards, regulations and codes of practice is a major concern in any market. As a global testing, inspection and certification service provider, we face a range of challenges to pursue this everyday.



As a world-leading technical service provider, TÜV Rheinland offers product quality and safety testing and certification services that help manufacturers reduce risk and streamline the process of designing, manufacturing and marketing toys.



TÜV Rheinland's trusted experts draw on their extensive technical knowledge to perform tests and certifications. As the leading provider of testing and certification services in the world, we have been assisting clients for over 145 years. We stand for safety, quality and efficiency at the intersection of man, technology and the environment.



We are always impartial and independent and take regulatory requirements, performance characteristics and consumer needs into account. This approach can help anyone in the toy industry to reduce development costs, improve returns, acquire new targets, increase customer retention, drive sales and obtain faster access to international markets.

SHOWCASE YOUR COMPLIANCE

After a product has been tested and certified to meet industry requirements, you can showcase your compliance through our Test Mark. It proves that your product has been assessed independently by TÜV Rheinland. With an individual ID number and QR code, TÜV Rheinland Test Marks offer easy access to the specifics of your products' compliance.



TÜV Rheinland also offers Certipedia – a transparent and consumer-friendly online certification database that contains all the important product information and testing criteria in one IoT-enabled and QR code-capable location.

Learn more at www.certipedia.com

WHY TÜV RHEINLAND?



We are a world-class provider of testing and certification services

Our labs are equipped with state-of-the-art testing facilities



Our services cover a wide range of products

We are accredited by the German DAkkS, the US CPSC and CARB, HOKLAS, MHLW, GAC and the Chinese CNAS, and are capable of providing services for global product compliance



The secret of success

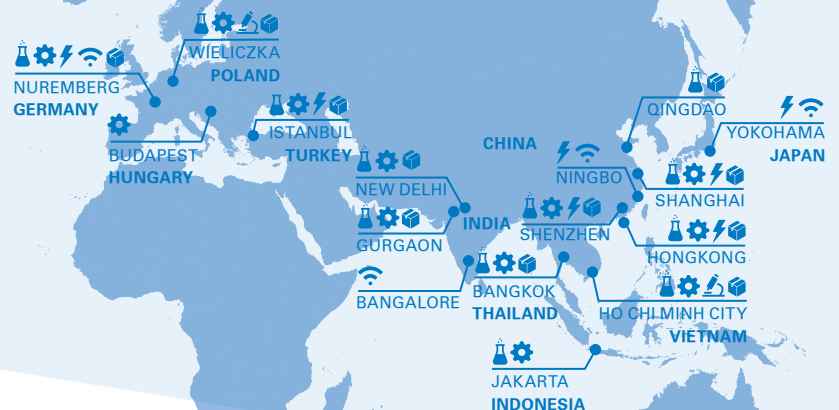
Safe, high quality, and fully compliant products are the key to healthy business growth. TÜV Rheinland's global network of independent laboratories provides the testing and certification services manufacturers, exporters and retailers need, for any market they target.

COMPREHENSIVE TESTING STANDARDS

Geography	Standard
Global	ISO
United States	ASTM, CPSIA, 16 CFR, FD
Europe	2009/48/EC, EN 71 series, EN62115, BS, DIN, REACH Annex XVII
Canada	CCPSA, CSA
Australia & New Zealand	AS/NZS ISO
Japan	JFSL
Others	South America, GSO, Saudi Arabia, Russia, China

GROWING GLOBAL LABORATORY NETWORK

No matter what you need or where you operate, TÜV Rheinland's growing network of testing and accredited laboratory has you covered for your testing needs.



Meeting quality expectations is the main goal for any manufacturer, buyer and retailer. Our Test Marks and Certifications can help your products stand out in competitive markets, add value and instill confidence in customers.

TOY PROOF MARK



This mark combines the safety requirements of the EC directive on the safety of toys, 2009/48/EC, with specific criteria concerning harmful substances. The mark enables a manufacturer to evaluate a single toy, as well as an economical way to certify a class of toys.

GS MARK



The TÜV Rheinland GS Mark is widely accepted throughout Europe for toys, as well as electrical products. It informs buyers, customers and consumers that the product, production process and user manuals have been tested by TÜV Rheinland and undergo regular surveillance audits.

GREEN PRODUCT MARK



TÜV Rheinland's Green Product Mark offers consumers and buyers a way to identify green and sustainable products, and minimize

the impact of consumer goods on the environment.

TÜV Rheinland offers Certipedia – a transparent and consumer-friendly online certification database. With the following benefits:

- Supports purchasing decisions (of distributors and end-user consumers)
- Showcases independently verified and certified products and services
- Organizes certificates and reduces administrative costs
- Offers 24x7 access to certifications and testing information
- Opens up new market opportunities and appeals to new target groups
- Creates additional customer confidence in advertising claims



PRODUCTS CATEGORIES	CHEMICAL TEST	PHYSICAL & MECHANICAL TEST*	MICROBIOLOGICAL TEST	ELECTRICAL TEST	EMC & WIRELESS TEST**	PACKAGING TEST
<ul style="list-style-type: none"> ▪ Infant toys ▪ Teethers and pacifiers 	●	●	●			●
<ul style="list-style-type: none"> ▪ Electrical toys (including battery-operated toys) ▪ Magnetic toys 	●	●		●	●	●
<ul style="list-style-type: none"> ▪ RC racing cars and boats ▪ Circuit racing games ▪ RC helicopters and drones ▪ Robots 	●	●		●	●	●
<ul style="list-style-type: none"> ▪ Bicycles and scooters 	●	●				●
<ul style="list-style-type: none"> ▪ Stuffed and textile toys ▪ Guns and projectile toys ▪ Rocking horses & ride-on toys ▪ Toy chests ▪ Activity toy for domestic use ▪ Tableware for kids 	●	●				●
<ul style="list-style-type: none"> ▪ Games, puzzles and books ▪ Experimental sets ▪ Arts and crafts 	●	●				●
<ul style="list-style-type: none"> ▪ Toy cosmetics ▪ Costumes and accessories 	●	●	●			●

(*) Includes Product Safety Assessment, Flammability Testing and Labeling & Age Grade Evaluations

(**) Includes radio product testing to EU ETSI, US FCC and other standards and procedures, certification for US market (FCC) or EU market (RED) and Bluetooth qualification testing

(***) Major wireless technologies: 27/40MHz, Bluetooth low energy, 2.4GHz, Wi-Fi

Reaching customers everywhere, safely and securely

Even the best toys are worthless without a market in which to sell them. And every market is different. Keeping track of one is a challenge, but the difficulties multiply rapidly with each new geography.

OUR MARKET ACCESS SERVICES

- G-Mark Conformity Assessment for export to the Middle East
- CCC for exports to China
- CE Conformity Assessment for exports to Europe
- Testing for Brazil (INMETRO), Mexico (NOM), Korea (EK Mark), KCC Mark), Australia (RCM, AUS Mark)



TÜV Rheinland can help identify and meet current market requirements, and take prompt action as changes appear in markets all over the world. In addition, we can help you get up to speed quickly, so you can add a new country or region almost as fast as the opportunities arise, eliminating the risk of shipment delays or regulatory hurdles due to bureaucratic bottleneck.

PROTECTING SMART TOYS

Smart toys offer a universe of new ways to stimulate the imagination of youngsters. But, like any connected technology, they can also create new security hazards, which can put users at risk and damage the reputation of manufacturers and toy brands.

The EU's new "General Data Protection Regulation" (GDPR), sets rigorous standards for the protection of personal data and privacy. All manufacturers – whether located within EU borders or not – are subject to the GDPR if their products or services are sold within the EU and involve the storage and processing of any EU citizens' personal information. Fines of up to 20 million Euro or 4% of the company's global revenues in that year can be levied for non-compliance.

With years of experience in information security, TÜV Rheinland can provide customers – especially those making high-tech toys which collect information for registration and

product activation purposes – with a professional interpretation of the applicable data protection and privacy laws. Our experts are available to answer any questions and help you achieve comprehensive security and regulatory compliance.

TÜV Rheinland also offers comprehensive consultation and solution competence in all aspects of information and cyber security, to make your products as safe and future-proof as possible. Our key services include wireless IoT security, operational technology, cyber risk assessment and mitigation.





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