



**TOYS &  
CHILDREN'S  
PRODUCTS TESTING**

# ABOUT STC

Established in 1963, Hong Kong Standards and Testing Centre (STC) is an independent, not-for-profit testing, inspection, and certification organisation headquartered in Hong Kong. It offers a one-stop professional conformity assessment service to clients around the world, helping them access global markets.

STC's global network includes testing facilities and client service offices in China's major provinces – Guangdong, Shanghai, and Changzhou – and in countries across the world: Vietnam, Japan, the USA, and Germany. Internationally-accredited testing facilities ensure that we can meet industry needs throughout the world.

Dedicated to improving product quality and safety standards, STC comprehensively supports the global supply chain, helping to build competitive advantage and customer confidence throughout the chain.



## STC Testing Service is Accredited by:



China Metrology Accreditation (CMA)



China National Accreditation Service (CNAS)



German Deutsche Akkreditierungsstelle (DAkkS)



Hong Kong Accreditation Service (HKAS – HOKLAS)



Japan Ministry of Health, Labour and Welfare (JMHLW)



Japan Safe Goods Mark System (SG MARK)



US Consumer Product Safety Commission (CPSC)



Vietnam National Accreditation Scheme (VILAS)

## Overview

Play to learn. Children love to use all their senses to explore their world. So unsafe toys, gifts, and premiums, may cause product rejects or refunds, or even result in hazards to children and law suits. Although countries have and enforce mandated toy standards and regulations, manufacturers and retailers alike are liable to possible claims against manufacturing defects and related health hazards.

## One-Stop Service

However, STC can help you minimise these hazards. We are continuously upgrading our services and facilities to fulfill your needs for a more effective, efficient, and comprehensive quality assurance service.

Our conformity assessment service covers the following product categories:

- ▶ Toys
- ▶ Children's Products
- ▶ Sporting Goods
- ▶ Baby Products
- ▶ Gifts and Premiums
- ▶ Stationery and School Items
- ▶ Children's Jewellery
- ▶ Kidult Products

Depending on what you need, we can start from the early stages of your product development cycle or pilot-test point and support you through to and beyond pre-shipment inspection.

## Scope of Service

-  Age Grading Assessment
-  Aging and Pre-conditioning
-  Appropriate Test Recommendation
-  Bacteriological Testing
-  Chemical Analysis
-  Electrical Toy Safety Testing
-  Electromagnetic Compatibility
-  Factory Evaluation
-  Flammability Testing
-  Incoming Material Testing
-  Material and Product Evaluation
-  Packaging Testing
-  Performance and Reliability Testing
-  Physical and Mechanical Testing
-  Inspection
-  Safety Testing
-  Transportation Testing
-  Certification Testing





STC also provides Compliance Verification Service for:



## Approved by **JMHLW** and the Japan Toy Association

In Japan, toys intended for infants must comply with the mandatory safety requirements in the “Specifications and Standards for Foods, Food Additives, etc.” document under the Food Sanitation Law, including:

- ▶ **Section III: Apparatus, Containers and Packaging, and/or**
- ▶ **Section IV: Toys**

The Japan Toy Safety Standard (ST Standard) and the ST Mark Scheme established by the Japan Toy Association provide toy manufacturers, retailers, and consumers with additional safeguards for toys intended for children up to the age of 14.



## Consumer Product Safety Act by The Ministry of Economy, Trade and Industry (METI)

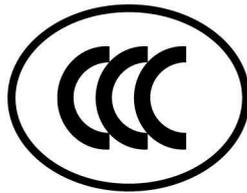
Consumer Product Safety Act by The Ministry of Economy, Trade and Industry (METI) of Japan specifically targets toys products designed for kids under 3 years old.



子供PSCマーク



# CHINA TOYS AND CHILDREN'S VEHICLES TESTING



## CCC for Toys

“CCC” stands for “China Compulsory Certification”. Before a product can be imported, sold, or used in business activities in China, it needs to obtain the CCC mark. The products that require the CCC mark are listed in the “Catalogue of Products Subject to China Compulsory Certification”.

To become CCC certified, product suppliers need to be evaluated by Designated CCC Testing Laboratories in China.

There are four classes of toys subject to CCC:

- ▶ **Ride-On Toys**
- ▶ **Electric Toys**
- ▶ **Plastic Toys (including playmat)**
- ▶ **Metal Toys**

## STC – the 1st CCC Laboratory in Hong Kong

Since 2012, STC has been approved by the Certification and Accreditation Administration of the People’s Republic of China (CNCA) as the first CCC laboratory in Hong Kong to undertake CCC testing for toys. This means that you can enter the Mainland China market hassle-free through STC’s one-stop service for CCC testing and certification.

## STC – Full-Service CCC Laboratory in China

STC (Guangdong) and STC (Shanghai) are CNCA-designated CCC laboratories for toys and children’s vehicles testing. We help you speed up your time to market and enhance your competitiveness by offering convenient and efficient one-stop testing and inspection services. These services are benchmarked against National Toy Safety Standard GB6675, which enables you to launch new products with assured quality at a lower cost.

## Accredited by CPSC & CNAS

Children's products – including children's bicycles, helmets, and sports products – must comply with the relevant safety requirements as detailed in the American Consumer Product Safety Commission (CPSC), ASTM, EN, and GB standards.

We are one of the few testing organisations accredited by CPSC and CNAS that can provide helmet and bicycle testing. At the same time, we offer EN 14120 testing for wrist, palm, knee, and elbow protectors for users of full sets of Roller Sports Equipment, skateboards, scooters, roller skates, and inline skates.

STC can help you with fast and reliable testing services for the following standards:

| Product             | Country & Region          | Standard            |
|---------------------|---------------------------|---------------------|
| Children's Bicycles | ▶ China                   | GB 14746 / ISO 8098 |
|                     | ▶ Europe                  | EN ISO 8098         |
|                     | ▶ America                 | 16 CFR 1512         |
|                     | ▶ UK                      | BS EN ISO 8098      |
| Bicycle Helmets     | ▶ Australia / New Zealand | AS/NZS 2063         |
|                     | ▶ Europe                  | EN 1078             |
|                     | ▶ America                 | 16 CFR 1203         |
|                     | ▶ UK                      | BS EN 1078          |
| Roller Protectors   | ▶ Europe                  | EN 14120            |
|                     | ▶ UK                      | BS EN 14120         |
| Skateboard          | ▶ Europe                  | EN 13613            |
|                     | ▶ UK                      | BS EN 13613         |
| Non-Powered Scooter | ▶ America                 | ASTM F2264          |
|                     | ▶ Europe                  | EN 14619            |
|                     | ▶ UK                      | BS EN 14619         |
|                     | ▶ China                   | GB 6675.12          |
| Roller Skate        | ▶ Europe                  | EN 13899            |
|                     | ▶ UK                      | BS EN 13899         |
|                     | ▶ China                   | GB/T 20096          |
| Inline Skate        | ▶ Europe                  | EN 13843            |
|                     | ▶ UK                      | BS EN 13843         |
|                     | ▶ China                   | GB/T 20096          |

# INTERNATIONAL TOY SAFETY STANDARDS

| Test Item   | Material                              | USA  | Europe                            | Australia                         | Canada   | China                      |
|---|---------------------------------------|--|-----------------------------------|-----------------------------------|--|----------------------------|
| Physical & Mechanical Properties                    | Whole Toy                             | 16 CFR 1500 / ASTM F963                        | EN 71 Part 1                      | AS/NZS ISO 8124-1                 | Toys Regulations   | GB 6675.1 / GB 6675.2      |
| Stuffing Cleanliness (Visual Check)                 | Stuffing                              | ASTM F963                                      | EN 71 Part 1                      | AS/NZS ISO 8124-1                 | Toys Regulations   | GB 6675.2                  |
| Stuffing Cleanliness (Chemical Test)                |                                       | Pennsylvania Regulation                        |                                   |                                   |  | GB/T 30400                 |
| Flammability  | Doll's Clothing / Fabric              | 16 CFR 1610 / ASTM F963                        | EN 71 Part 2                      | AS/NZS ISO 8124-2                 | Textile Flammability Regulations                                   | GB 6675.1 / GB 6675.3      |
|   | Solid / Whole Toy                     | 16 CFR 1500.44 / ASTM F963                     |                                   |                                   | Toys Regulations   |                            |
| Heavy Metals Content                                | Paint Coatings                        | 16 CFR 1303 / ASTM F963 / CPSIA                | EN 71 Part 3                      | AS/NZS ISO 8124-3                 | Toys Regulations   | GB 6675.1 / GB 6675.4      |
|   | Other Materials                       | CPSIA / ASTM F963                              | EN 71 Part 3                      | AS/NZS ISO 8124-3                 | Consumer Products Containing Lead (Contact with Mouth) Regulations | GB 6675.1 / GB 6675.4      |
|   | Children's Jewelry                    | CPSIA / ASTM F2923                             | EN 71 Part 3                      | AS/NZS ISO 8124-3                 | Children's Jewelry Regulations                                     | GB 28480                   |
| Experimental Sets Chemical Toy (sets)               | Whole Toy                             | FHSA / CA Prop 65 / Washington CHCC            | EN 71 Part 4<br>EN 71 Part 5      | -                                 | -  | GB 26387<br>GB 6675.13     |
| Toxicity  | Art Materials                         | LHAMA / ASTM D4236                             | EN 71 Part 7 (Finger Paints)      | AS/NZS ISO 8124-3 (Finger Paints) | -  | GB 6675.14 (Finger Paints) |
| Formaldehydes & Others Nitrosamines & Nitrosalables | Certain Materials                     | FHSA / CA Prop 65                              | EN 71 Part 10 & 11                | -                                 | -  | -                          |
|   |                                       | ASTM F963                                      | EN 71 Part 12                     | -                                 | -  | -                          |
| Trampoline  | -                                     | -  | EN 71 Part 14                     | -                                 | -  | -                          |
| Microbiological Test                                | Liquid / Gel / Paste / Cosmetics      | ASTM F963 / USP 61 & 62 / USP 51               | 2020/2184 Directive 98 / 83 / EC  | NSW Product Safety Order          | -  | -                          |
| Electrical Toy Safety                               | Whole Toy                             | ASTM F963                                      | IEC 62115 & EN 60825              | AS/NZS 62115                      | -  | GB 19865                   |
| BPA Migration Test                                  | Whole Toy                             | Various States Requirements / FDA / CA Prop 65 | 2009/48/EC                        | -                                 | -  | GB 14942                   |
|   | Feeding Bottles Food Contact Articles |  | EU No. 10/2011<br>EU No. 321/2011 |                                   |  |                            |
| Heavy Metals Test                                   | Packaging                             | CONEG  | Directive 94 / 62 / EC            | -                                 | -  | -                          |
| TCEP  | -                                     | -  | EN 71 Part 16                     | -                                 | -  | -                          |
| TCP   | -                                     | -  | EN 71 Part 16                     | -                                 | -  | -                          |
| TDCP  | -                                     | -  | EN 71 Part 16                     | -                                 | -  | -                          |
| BPA   | -                                     | -  | EN 71 Part 19                     | -                                 | -  | -                          |
| BIT<br>1,2-benzisothiazol-3(2H)-one                 | -                                     | -  | EN 71 Part 17                     | -                                 | -  | -                          |
| CIT<br>5-Chloro-2-methylisothiazolin-3(2H)-one      | -                                     | -  | EN 71 Part 17                     | -                                 | -  | -                          |
| MIT<br>2-methylisothiazolin-3(2H)-one               | -                                     | -  | EN 71 Part 17                     | -                                 | -  | -                          |
| CIT:MIT<br>in a ratio of 3:1                        | -                                     | -  | EN 71 Part 17                     | -                                 | -  | -                          |
| Formamide   | -                                     | -  | EN 71 Part 15                     | -                                 | -  | -                          |
| Phenol  | -                                     | -  | EN 71 Part 18                     | -                                 | -  | -                          |

# INTERNATIONAL TOY PHYSICAL & MECHANICAL REQUIREMENTS

| Japan                                    |
|--|
| ST Standard Part 1 / CPSC *              |
| ST Standard Part 1 / CPSC *              |
| -  |
| ST Standard Part 2 / CPSC *              |
| ST Standard Part 3 / Food Sanitation Law |
| -  |
| ST Standard Part 3 / Food Sanitation Law |
| -  |
| -  |
| ST Standard Part 3 / Food Sanitation Law |



## TOY ABUSE TEST PARAMETERS

| Test Item   | Age (Months)  | USA CPSC / ASTM F963                                | Europe EN 71 Part1   | Australia / New Zealand AS/NZS ISO 8124 | Canada Toy Regulations SOR / 2011-17               | Japan Toy Standard   | China GB 6675 Part2  |
|-------------|---------------|---|--|---|--|--|--|
| Drop        | 0 to ≤ 18     | 4.5ft ± 0.5in (137cm)<br>10 drops                   |  | 138 ± 5cm,<br>10 drops                  | 4.5ft (137cm) 4 drops (<3 yrs)                     | 138 ± 5cm,<br>10 drops (<18 months)  | Mass of toy <1.4kg,<br>138 ± 5cm, 10 drops (<18 months)    |
|             | > 18 to ≤ 36  | 3ft ± 0.5in (91cm)<br>4 drops                       | 850 ± 50mm,<br>5 drops (≤ 168 months)  | 93 ± 5cm,<br>4 drops                    |  | 93 ± 5cm,<br>4 drops (18 to 96 months)   | Mass of toy <4.5kg,<br>93 ± 5cm, 4 drops (18 to 96 months) |
|             | > 36 to ≤ 168 | 3ft ± 0.5in (91cm) 4drops (>36 to ≤ 96 months)      |  | 93 ± 5cm, 4 drops (≥36 to ≤96 months)   | 3ft (91cm) 4 drops (≥3 yrs)                        |  |  |
| Compression | 0 to ≤ 18     | 20 ± 0.5lbs (89.0 ± 2N)                             | For masks & helmets and toys < 36 months only<br>110 ± 5N (24.7lbs)  | 114N ± 2.0N                             |  | 114 ± 2N through a 30 ± 1.5mm disc (<36 months)  | 114N ± 2.0N (<36 months)                                   |
|             | > 18 to ≤ 36  | 25 ± 0.5lbs (111.3 ± 2N)                            |  |   |  | 136N ± 2.0N (up to 96 months)  | 136N ± 2.0N (36 to <96 months)                             |
|             | > 36 to ≤ 168 | 30 ± 0.5lbs (133.5 ± 2N) (>36 to ≤ 96 months)       |  |   |  |  |  |
| Torque      | 0 to ≤ 18     | 2 ± 0.2in-lbs (2.3 ± 0.2kg-cm)                      | For mouth-actuated toys, masks & helmets, aquatic toy and toys < 36 months.<br>0.34Nm (3.5kg-cm) or a rotation of 180° | 0.45N.m ± 0.02N.m                       | For rattle: 1Nm (10.2kg-cm)                        | 0.45 ± 0.02Nm or a rotation of 180° (<36 months)   | 0.45N.m ± 0.02N.m (<96 months)                             |
|             | > 18 to ≤ 36  | 3 ± 0.2in-lbs (3.5 ± 0.2kg-cm)                      |  |   |  |  |  |
|             | > 36 to ≤ 168 | 4 ± 0.2in-lbs (4.6 ± 0.2kg-cm) (>36 to ≤ 96 months) |  |   |  |  |  |
| Tension     | 0 to ≤ 18     | 10 ± 0.5lbs (44.5 ± 2N)                             | ≤ 6mm: 50 ± 2N (11.2lbs)   | 70N ± 2N                                | For eye / nose: 20lbs (9kg)                        | 70N ± 2N (<36 months)  | 70 ± 2N (<96 months)                                       |
|             | > 18 to ≤ 36  | 15 ± 0.5lbs (66.8 ± 2N)                             | > 6mm: 90 ± 2N (20.2lbs)   | 70N ± 2N (up to 96 months)              | For rattle: 50N (11.23lbs)<br>Other; 10lbs (44.5N) | Seams: 70 ± 2N (<36 months)<br>Protective: 70N ± 2N  |  |
|             | > 36 to ≤ 168 | 15 ± 0.5lbs (66.8 ± 2N) (>36 to ≤ 96 months)        | Seams: 70 ± 2N<br>Protective: 60 ± 2N  |   |  |  |  |
| Flexure*    | 0 to ≤ 18     | 10 ± 0.5lbs (44.5 ± 2N)                             | 70 ± 2N (15.7lbs) (≤ 168 months)   | 70N ± 2N                                |  | 70N ± 2N (metal wires)   | 70 ± 2N (<96 months)                                       |
|             | > 18 to ≤ 36  | 15 ± 0.5lbs (66.8 ± 2N)                             |  |   |  |  |  |
|             | > 36 to ≤ 168 | 15 ± 0.5lbs (66.8 ± 2N) (>36 to ≤ 96 months)        |  |   |  |  |  |
| Bite        | 0 to ≤ 18     | For CPSC only<br>25lbs (11.3kgf)                    |  |   |  | Test load: 11kg<br>For squeeze, rattles & other certain toys with external dimension ≤ 32mm and put into the mouth in depth ≥ 6mm. |  |
|             | > 18 to ≤ 36  | 50lbs (22.6kgf)                                     |  |   |  |  |  |
|             | > 36 to ≤ 168 | 100lbs (45.5kgf) (>36 to ≤ 96 months)               |  |   |  |  |  |

\* 1 cycle per 2 sec, with a rest of 60 sec after each 10 cycles, for 30 cycles.

# INTERNATIONAL TOY TOXIC ELEMENTS REQUIREMENTS



| Element              | USA                     |   |                | Australia / New Zealand |  |                |           | Canada                      |   |  | Japan                               |  | China                    |              |                |   |                      |
|----------------------|-------------------------|---|----------------|-------------------------|--|----------------|-----------|-----------------------------|---|--|-------------------------------------|--|--------------------------|--------------|----------------|---|----------------------|
|                      | ASTM F963               |   |                | AS/NZS ISO 8124.3       |  |                |           | Consumer Product Safety Act |   |  | Food Sanitation Law                 | ST Standards Part 3  | GB 6675.4                |              |                |   |                      |
|                      | Paint & similar coating | Substrates of other materials, and metal, glass or ceramic that are small parts | Modelling clay | Finger paint            | Any toy material except modelling clay | Modelling clay | Slime     | Paint & surface coating     | Children's jewellery (metal or non-metal) | Consumer product containing lead (contact with mouth) regulation | Paint coating including PVC coating | Coating on toy, ink and the like used for graphic instrument | Children's metallic toys | Finger paint | Modelling clay | Any toys material except modelling clay | Slime & similar toys |
|                      | ppm                     |   |                | AS/NZS ISO              | mg/kg                                  |                |           | mg/kg                       | mg/kg                                     |  | mg/kg                               |  | mg/kg                    |              |                |   |                      |
| <b>Antimony (Sb)</b> | Sol. 60                 | Sol. 60   | Sol. 60        | Sol. 10                 | Sol. 60                                | Sol. 60        | Sol. 10   | Sol. 1000                   | -   | -  | -                                   | Sol. 60  | -                        | Sol. 10      | Sol. 60        | Sol. 60                                 | Sol. 10              |
| <b>Arsenic (As)</b>  | Sol. 25                 | Sol. 25   | Sol. 25        | Sol. 10                 | Sol. 25                                | Sol. 25        | Sol. 10   | Sol. 1000                   | -   | -  | Sol. 25                             | Sol. 25  | -                        | Sol. 10      | Sol. 25        | Sol. 25                                 | Sol. 10              |
| <b>Barium (Ba)</b>   | Sol. 1000               | Sol. 1000   | Sol. 250       | Sol. 350                | Sol. 1000                              | Sol. 250       | Sol. 350  | Sol. 1000                   | -   | -  | -                                   | Sol. 1000  | -                        | Sol. 350     | Sol. 250       | Sol. 1000                               | Sol. 350             |
| <b>Cadmium (Cd)</b>  | Sol. 75                 | Sol. 75<br>Sol. 200µg*  | Sol. 50        | Sol. 15                 | Sol. 75                                | Sol. 50        | Sol. 15   | Sol. 1000                   | TI. 130                                   | -  | Sol. 75                             | Sol. 75  | -                        | Sol. 15      | Sol. 50        | Sol. 75                                 | Sol. 15              |
| <b>Chromium (Cr)</b> | Sol. 60                 | Sol. 60   | Sol. 25        | Sol. 25                 | Sol. 60                                | Sol. 25        | Sol. 25   | -                           | -   | -  | -                                   | Sol. 60  | -                        | Sol. 25      | Sol. 25        | Sol. 60                                 | Sol. 25              |
| <b>Lead (Pb)</b>     | TI. 90*                 | TI. 100*  | TI. 100*       | Sol. 25                 | Sol. 90                                | Sol. 90        | Sol. 25   | TI. 90                      | TI. 90                                    | TI. 90   | Sol. 90                             | Sol. 90  | Sol. 90                  | Sol. 25      | Sol. 90        | Sol. 90                                 | Sol. 25              |
|                      | Sol. 90                 | Sol. 90   | Sol. 90        |                         |  |                |           |                             |   |  |                                     |  |                          |              |                |   |                      |
| <b>Mercury (Hg)</b>  | Sol. 60                 | Sol. 60   | Sol. 25        | Sol. 10                 | Sol. 60                                | Sol. 25        | Sol. 10   | TI. 10                      | -   | -  | -                                   | Sol. 60  | -                        | Sol. 10      | Sol. 25        | Sol. 60                                 | Sol. 10              |
| <b>Selenium (Se)</b> | Sol. 500                | Sol. 500  | Sol. 500       | Sol. 50                 | Sol. 500                               | Sol. 500       | Sol. 50   | Sol. 1000                   | -   | -  | -                                   | Sol. 500   | -                        | Sol. 50      | Sol. 500       | Sol. 500                                | Sol. 50              |
| <b>Boron (B)</b>     | -                       | -   | -              | -                       | -                                      | Sol. 3750      | Sol. 1250 | -                           | -   | -  | -                                   | -  | -                        | -            | Sol. 1200      | -                                       | Sol. 300             |

ppm = parts per million    Sol. = soluble    mg/kg = milligram per kilogram    TI. = total    \*Total content as limited by CPSIA.

# INTERNATIONAL PHTHALATES CONTENT LIMITS

| Phthalate                           | CAS Number              | USA CPSC | USA California Prop 65 | USA California AB 1108 | Europe REACH | Australia Product Safety Law | Canada CCPSA | China GB 6675 | Japan (ST/FSL) | Korea      | Taiwan CNS 4797  | HK         | ISO 8124-6                            |
|-------------------------------------|-------------------------|----------|------------------------|------------------------|--------------|------------------------------|--------------|---------------|----------------|------------|------------------|------------|---------------------------------------|
| Diisobutyl Phthalate (DIBP)         | 84-69-5                 | 0.1%     | -                      | -                      |              | -                            | -            | -             | -              | -          | -                | -          | -                                     |
| Dibutyl Phthalate (DBP)             | 84-74-2                 | 0.1%     | ND                     | 0.1%                   |              | -                            | 0.1%         |               | 0.1%           |            |                  |            |                                       |
| Benzyl Butyl Phthalate (BBP)        | 85-68-7                 | 0.1%     | ND                     | 0.1%                   | Sum < 0.1%   | -                            | 0.1%         | Sum < 0.1%    | 0.1%           | Sum < 0.1% |                  | Sum < 0.1% |                                       |
| Bis(2-ethylhexyl) Phthalate (DEHP)  | 117-81-7                | 0.1%     | ND                     | 0.1%                   |              | 1%                           | 0.1%         |               | 0.1%           |            |                  |            |                                       |
| Di-isononyl Phthalate (DINP)        | 28553-12-0 / 68515-48-0 | 0.1%     | ND                     | 0.1%                   |              | -                            | 0.1%         |               | 0.1%           |            | Sum of 6P < 0.1% |            | Testing method for 6P, no requirement |
| Di-isodecyl Phthalate (DIDP)        | 26761-40-0 / 68515-49-1 | -        | ND                     | 0.1%                   | Sum < 0.1%   | -                            | 0.1%         | Sum ≤ 0.1%    | 0.1%           | Sum < 0.1% |                  | Sum < 0.1% |                                       |
| Di-n-octyl Phthalate (DNOP)         | 117-84-0                | -        | -                      | 0.1%                   |              | -                            | 0.1%         |               | 0.1%           |            |                  |            |                                       |
| Dimethyl Phthalate (DMP)            | 131-11-3                | -        | -                      | -                      | -            | -                            | -            | -             | -              | -          | -                | -          | -                                     |
| Diethyl Phthalate (DEP)             | 84-66-2                 | -        | -                      | -                      | -            | -                            | -            | -             | -              | -          | -                | -          | -                                     |
| Di-n-hexyl Phthalate (DNHP / DHEXP) | 84-75-3                 | 0.1%     | ND                     | -                      | -            | -                            | -            | 0.1%          | -              | -          | -                | -          | -                                     |
| Di-n-pentyl Phthalate (DPENP)       | 131-18-0                | 0.1%     | -                      | -                      | -            | -                            | -            | 0.1%          | -              | -          | -                | -          | -                                     |
| Dicyclohexyl Phthalate (DCHP)       | 84-61-7                 | 0.1%     | -                      | -                      | -            | -                            | -            | 0.1%          | -              | -          | -                | -          | -                                     |

ND = Not detected



# EU TOY SAFETY DIRECTIVE

## CHEMICAL REQUIREMENTS

### MIGRATION LIMITS FOR TOXIC ELEMENTS

| Element       | Category I:  | Category II:                      | Category III:                |
|---------------|--|-----------------------------------|------------------------------|
|               | Dry, brittle, powder-like / pliable material (mg/kg) | Liquid or sticky material (mg/kg) | Scraped off material (mg/kg) |
| Aluminium     | 2250   | 560                               | 28130                        |
| Antimony      | 45   | 11.3                              | 560                          |
| Arsenic       | 3.8  | 0.9                               | 47                           |
| Barium        | 1500   | 375                               | 18750                        |
| Boron         | 1200   | 300                               | 15000                        |
| Cadmium       | 1.3  | 0.3                               | 17                           |
| Chromium(III) | 37.5   | 9.4                               | 460                          |
| Chromium(VI)  | 0.02   | 0.005                             | 0.053*                       |
| Cobalt        | 10.5   | 2.6                               | 130                          |
| Copper        | 622.5  | 156                               | 7700                         |
| Lead          | 2.0  | 0.5                               | 23                           |
| Manganese     | 1200   | 300                               | 15000                        |
| Mercury       | 7.5  | 1.9                               | 94                           |
| Nickel        | 75   | 18.8                              | 930                          |
| Selenium      | 37.5   | 9.4                               | 460                          |
| Strontium     | 4500   | 1125                              | 56000                        |
| Tin           | 15000  | 3750                              | 180000                       |
| Organic Tin   | 0.9  | 0.2                               | 12                           |
| Zinc          | 3750   | 938                               | 46000                        |

\*3mg/kg concentration limit for Chromium VI in leather articles (Entry 47 in Annex XVII to REACH Regulation)

# EU TOY SAFETY DIRECTIVE CHEMICAL REQUIREMENTS

## EU DIRECTIVE 2009/48/EC

| CMR SUBSTANCES (CONCENTRATION LIMITS) |              |           |            | FRAGRANCES (CONCENTRATION LIMITS) |                          |                          |
|---------------------------------------|--------------|-----------|------------|-----------------------------------|--------------------------|--------------------------|
| Category                              | Carcinogenic | Mutagenic | Reprotoxic |                                   | 58 allergenic fragrances | 72 allergenic fragrances |
| Cat 1A                                | 0.1%         | 0.1%      | 0.3%       | Limit                             | ≤100ppm                  | ≤100ppm                  |
| Cat 1B                                | 0.1%         | 0.1%      | 0.3%       |                                   | Over Limit               | Ban                      |
| Cat 2                                 | 1%           | 1%        | 3%         |                                   |                          |                          |

## NITROSAMINES AND NITROSATABLE SUBSTANCES (MIGRATION LIMITS)

| Substance     | Scope   | Applications  | Limit     |
|---------------|---|---|-----------|
| Nitrosamines  | Toys intended for children under 36 months or in other toys intended to be put in the mouth | Used in manufacturing rubber materials, balloons, teething, finger paints | 0.05mg/kg |
| Nitrosatables |   |   | 1mg/kg    |

## RESTRICTED SUBSTANCES LISTED IN EN 71 PART 15-19 AND APPENDIX C OF ANNEX II

| Restricted Substance | Scope   | Applications   | Limit  |
|----------------------|---|--|--|
| Aniline              | Toys intended for children under 36 months or in other toys intended to be put in the mouth | Dye used in coloured toys  | 30mg/kg after reductive cleavage in textile toy material and leather toy material<br>10mg/kg as free aniline in finger paints<br>30mg/kg after reductive cleavage in finger paints   |
| Formaldehyde         |   | Polymeric, wood, textile, paper & water-based materials used in toys   | 1.5mg/l (migration limit) in polymeric toy material<br>0.1ml/m <sup>3</sup> (emission limit) in resin-bonded wood toy material<br>30mg/kg (content limit) in textile toy material<br>30mg/kg (content limit) in leather toy material<br>30mg/kg (content limit) in paper toy material<br>10mg/kg (content limit) in water-based toy material   |
| Cadmium              | Surface coating / paint / plastic / metal parts of jewelry                                  | Accessible and inaccessible plastic and coating; additional test on metal for jewelry items  | 0.01%  |
| Nickel Release       | Protective gloves   | Metal components with prolonged skin contact   | (a) in any post assemblies which are inserted into pierced ears and other pierced parts of the human body unless the rate of nickel release from such post assemblies is less than 0.2µg/cm <sup>2</sup> /week (migration limit);<br>(b) in articles intended to come into direct and prolonged contact with the skin if the rate of nickel release from the parts of these articles coming into direct and prolonged contact with the skin is greater than 0.5µg/cm <sup>2</sup> /week. |
| Azo-Dyes             | Product with prolonged skin contact textile component                                       | In the articles or in the dyed parts thereof, according to the testing methods listed in Appendix 10, shall not be used, in textile and leather articles which may come into direct and prolonged contact with the human skin or oral cavity, such as:<br>- clothing, bedding, towels, hairpieces, wigs, hats, nappies and other sanitary items, sleeping bags;<br>- footwear, gloves, wristwatch straps, handbags, purses / wallets, briefcases, chair covers, purses worn round the neck;<br>- textile or leather toys and toys which include textile or leather garments;<br>- yarn and fabrics intended for use by the final consumer. | 30mg/kg (0.003% by weight)   |
| PAHs                 | Articles with direct contact with the skin or oral cavity                                   | Plastic / rubber / coating / synthetic fabric (black and grey color) with direct contact with skin or oral cavity  | Toys, including activity toys, and childcare articles, shall not be placed on the market, if any of their rubber or plastic components that come into direct as well as prolonged or short-term repetitive contact with the human skin or the oral cavity, under normal or reasonably foreseeable conditions of use, contain more than 0.5mg/kg (0.00005% by weight of this component) of any of the listed PAHs.  |
| Phthalates           | Toys and child care articles  | Plastic / coating / adhesive / glue / label  | 0.1% by weight of the plasticised material   |
| Bisphenol A          | Toys intended for children under 36 months or in other toys intended to be put in the mouth | PC, PVC, epoxy   | 0.04mg/l (migration limit)   |

## EU REGULATION (EC) NO. 1223/2009: COSMETICS

### APPLICABLE TO COSMETIC TOYS

|             | Requirements   |
|-------------|--|
| Composition | Only authorised preservations and colourants can be used |
| Labelling   | List of ingredients and "Best Before" date               |

## EU DIRECTIVE 2011/65/EU : ROHS 2

### APPLICABLE TO ELECTRIC TOYS

|                      | Concentration Limit | 1000ppm  | 100ppm  |
|----------------------|---------------------|--|---------|
| Restricted Substance |                     | Lead, Mercury, Chromium VI, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE), Bis (2-Ethylhexyl) Phthalate (DEHP)*, Butyl Benzyl Phthalate (BBP)*, Dibutyl Phthalate (DBP)*, Diisobutyl Phthalate (DIBP)* | Cadmium |

\*Note : The restriction of DEHP, BBP, DBP, and DIBP shall not apply to toys, which are already subjected to the restriction of DEHP, BBP, DBP, and DIBP through entry 51 of Annex XVII to REACH Regulation (EC) No. 1907/2006.

# CHILDREN'S PRODUCTS

## INTERNATIONAL SAFETY STANDARDS

| Product  | USA        | Europe       | UK                      | Australia     | New Zealand   | China    |
|--|------------|--------------|-------------------------|---------------|---------------|----------|
| Baby Dummies   | ASTM F963  | EN 1400      | BS EN 1400              | AS 2432       | AS 2432       | GB 28482 |
| Baby Soother Holders   | -          | EN 12586     | BS EN 12586             | -             | -             | -        |
| Baby Walking Frames  | ASTM F977  | EN 1273      | BS EN 1273              | -             | -             | GB 14749 |
| Baby Carriers  | ASTM F2236 | EN 13209     | BS EN 13209             | -             | -             | -        |
| Bottle Teats   | -          | EN 14350     | BS EN 14350             | -             | -             | GB 38995 |
| Bunk Beds for Domestic Use   | ASTM F1427 | EN 747       | BS EN 747               | AS/NZS 4220   | AS/NZS 4220   | -        |
| Changing Units   | ASTM F2388 | EN 12221     | BS EN 12221             | -             | -             | -        |
| Carry Cots and Similar Handled Products and Stands                 | ASTM F2050 | EN 1466      | BS EN 1466              | -             | -             | -        |
| Child Safety Barriers for Domestic Use                             | ASTM F1004 | EN 1930      | BS EN 1930              | -             | -             | -        |
| Children's Cots for Domestic Use                                   | ASTM F1169 | EN 716       | BS EN 716               | AS/NZS 2172   | AS/NZS 2172   | -        |
| Children's High Chairs & Multipurpose High Chairs for Domestic Use | ASTM F404  | EN 14988     | BS EN 14988             | AS 4684       | -             | GB 22795 |
| Children's Safety Harnesses  | -          | EN 13210     | BS EN 13210             | -             | -             | -        |
| Playpens for Domestic Use  | ASTM F406  | EN 12227     | BS EN 12227             | -             | -             | GB 29281 |
| Wheeled Child Conveyances  | ASTM F833  | EN 1888      | BS EN 1888              | AS/NZS 2088   | AS/NZS 2088   | GB 14748 |
| Children's Paints  | ASTM F963  | EN 71 Part 3 | BS EN 71-3<br>BS 5665-3 | AS/NZS 8124-3 | AS/NZS 8124-3 | GB 6675  |
| Children's Sunglasses  | ANSI Z80.3 | EN ISO 12312 | EN ISO 12312            | AS/NZS 1067   | AS/NZS 1067   | -        |
| Children's Cutlery, Feeding Utensils                               | -          | EN 14372     | BS EN 14372             | -             | -             | -        |
| Baby Jumper  | ASTM F2167 | -            | -                       | -             | -             | -        |

| Product              | USA                            | Europe          | UK              | China      |
|----------------------|--------------------------------|-----------------|-----------------|------------|
| Children's Tricycle  | ANSI Z315.1                    | EN 71           | BS EN 71        | GB 14747   |
| Framed Back Carrier  | ASTM F2549 /<br>16 CFR 1230    | EN 13209-1      | BS EN 13209-1   | -          |
| Bassinet and Cradle  | ASTM F2194 /<br>16 CFR 1218    | EN 1130         | BS EN 1130      | -          |
| Bedside Sleeper      | ASTM F2906 /<br>16 CFR 1222    | EN 1130         | BS EN 1130      | -          |
| Infant Rocker        | ASTM F3084                     | EN 12790        | BS EN 12790     | GB/T 42804 |
| Table Mounted Chairs | ASTM F1235 /<br>16 CFR 1233    | EN 1272         | BS EN 1272      | -          |
| Baby Soother         | 16 CFR 1511                    | EN 1400         | BS EN 1400      | GB 28482   |
| Baby Sling Carrier   | ASTM F2907-22 /<br>16 CFR 1228 | PD CEN/TR 16512 | PD CEN/TR 16512 | -          |
| Children's Jewellery | ASTM F2923 /<br>ASTM F963      | EN 71           | -               | -          |



## Who are Kidults?

Kidults are adults who have retained a childlike sense of wonder and enthusiasm for the world around them. They are often characterised by a strong sense of curiosity and willingness to explore and experience new things. They are unafraid of being silly, activating their imaginations, and finding joy in simple pleasures.

## Which Toy Categories are Considered Kidult?

- ▶ Collectible Figurines and Models
- ▶ Retro and Nostalgic Toys
- ▶ Creative and Artistic Toys
- ▶ Interactive and Tech-Based Toys
- ▶ Therapy Toys
- ▶ Hobby Goods
- ▶ Magic Items
- ▶ Mystery Boxes
- ▶ Adult (Sex) Toys

## Which International Standards does STC Cover?

- ✔ ASTM F963 - Standard Consumer Safety Specification for Toys Safety
- ✔ CPSIA - Consumer Product Safety Improvement Act (CPSIA)
- ✔ ISO 8124 - Safety of Toys
- ✔ ISO 3533 - Safety of Sex Toys
- ✔ EN 71 - Toy Safety Lab Testing
- ✔ Canada Consumer Product Safety Act (CCPSA)
- ✔ Japan Food Sanitation Law (JFSL)
- ✔ China GB - General technical requirements for Fashion Figures and Similar Products for Appreciation and Collection

## Which Custom-made Tests can STC do?

- ✔ Sharp points / edges
- ✔ Small parts
- ✔ Bite / tear / pull
- ✔ Durability / fatigue / failure
- ✔ Torque
- ✔ Flex
- ✔ Compression
- ✔ Stuffing analysis
- ✔ Flammability
- ✔ Moisture tolerance
- ✔ Colourfastness
- ✔ Azo dyes
- ✔ Soluble heavy metals
- ✔ Formaldehyde release
- ✔ Plasticisers (phthalates)
- ✔ Polycyclic aromatic hydrocarbons (PAH)
- ✔ Toxics in packaging

### SAFETY STANDARDS FOR KIDULT PRODUCTS

| Product              | USA                                      | Europe                | China               |
|----------------------|--|-----------------------|---------------------|
| Model Figures / Kits | CPSC, 16 CFR 1303, ASTM F963, CA Prop 65 | GPSR* 2023/988, REACH | GB/T 26701          |
| Mystery Boxes        | CPSC, 16 CFR 1303, ASTM F963, CA Prop 65 | GPSR 2023/988, REACH  | GB/T 26701, GB 6675 |
| Collectible Products | CPSC, 16 CFR 1303, ASTM F963, CA Prop 65 | GPSR 2023/988, REACH  | GB/T 26701, GB28480 |
| Adult (Sex) Toys     | CPSC, ISO 3533                           | GPSR, ISO 3533        | ISO 3533            |
| Hobby Goods          | CPSC, 16 CFR 1303, ASTM F963, CA Prop 65 | GPSR 2023/988, REACH  | GB 6675             |

\*GPSR: General Product Safety Regulation 2023/988

# GENERAL INFORMATION / WARNING REQUIREMENTS

## EUROPE

### EN71 - Small Parts Warning

For children 3 years old and over, if the toy presents small parts *as received* and *after abuse test*, a small part warning or phrase(s) with similar meanings shall be added on the package.

#### Example

“Warning. Choking hazard. Contains small parts.  
Not for children under 36 months”.

“Warning. Choking hazard. Contains small parts.  
Not for children under three years”.

#### Can substitute:

- ▶ “Not suitable for children under 36 months”
- ▶ “Not suitable for children under three years”

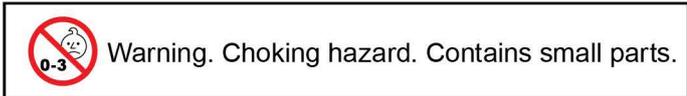
#### Requirements:

- ▶ **At least 10mm in size**  
(10mm(H)x10mm(W))
- ▶ **Red Circle**
- ▶ **White Background**
- ▶ **Black Font**



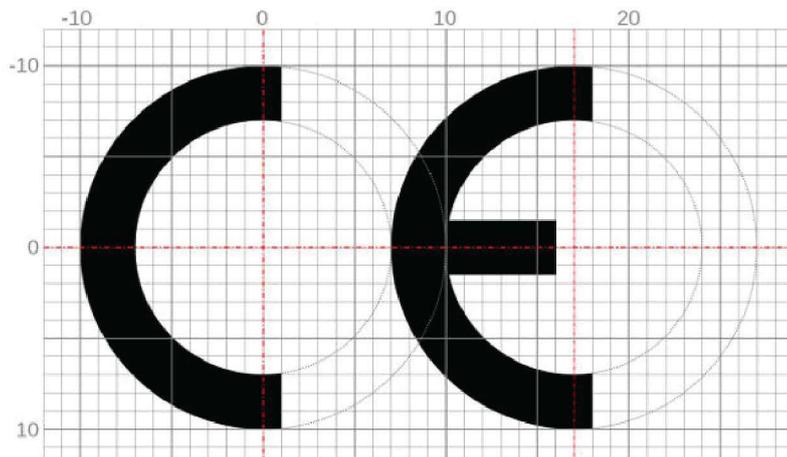
*\*\*The word “Warning” must be included with the age warning symbol\*\**

#### Example



### CE Mark Format

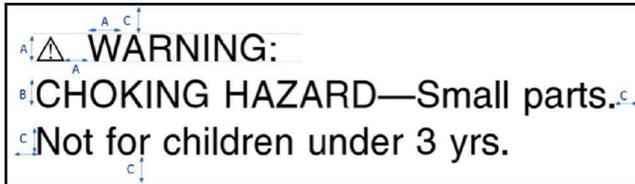
- ▶ The CE marking shall consist of the initials “CE” in the following form:



- ▶ Proportions given in the above image shall be respected even for changes in size
- ▶ Marking shall be at least 5 mm tall

### ASTM F963 - Small Parts Warning

For children 3 - 6 years old, if the toy presents small parts *as received*, a small part warning should be added on the principal display panel (PDP) of the package (generally PDP means the front side of the package with the largest area), and should read as below:



| Area of PDP (inch <sup>2</sup> )            | 0-2  | +2-5 | +5-10 | +10-15 | +15-30 | +30-100 | +100-400 | +400 |
|---|------|------|-------|--------|--------|---------|----------|------|
| (A) Type Size<br>Signal Word (inch)         | 3/64 | 1/16 | 3/32  | 7/64   | 1/8    | 5/32    | 1/4      | 1/2  |
| (B) Type Size<br>Statement of Hazard (inch) | 3/64 | 3/64 | 1/16  | 3/32   | 3/32   | 7/64    | 5/32     | 1/4  |
| (C) Type Size<br>Other Material (inch)      | 1/32 | 3/64 | 1/16  | 1/16   | 5/64   | 3/32    | 7/64     | 5/32 |

| Area of PDP (inch <sup>2</sup> )          | 0-2  | +2-5 | +5-10 | +10-15 | +15-30 | +30-100 | +100-400 | +400  |
|---|------|------|-------|--------|--------|---------|----------|-------|
| (A) Type Size<br>Signal Word (mm)         | 1.19 | 1.59 | 2.38  | 2.78   | 3.18   | 3.97    | 6.35     | 12.70 |
| (B) Type Size<br>Statement of Hazard (mm) | 1.19 | 1.19 | 1.59  | 2.38   | 2.38   | 2.78    | 3.97     | 6.35  |
| (C) Type Size<br>Other Material (mm)      | 0.79 | 1.19 | 1.59  | 1.59   | 1.98   | 2.38    | 2.78     | 3.97  |

### CPSIA - Tracking Label

For children 12 years old and younger, a differentiable mark must be affixed onto the products and packaging permanently.

The tracking label for Children's Products must contain:

- ▶ **Manufacturer / Private labeller**
- ▶ **Production Site**
- ▶ **Production Date**
- ▶ **Batch / Run number**
- ▶ **Additional information for identifying the product**

# GENERAL INFORMATION / WARNING REQUIREMENTS

## JAPAN

### PSC Mark

JTA has updated Japanese ST Standard (ST-2025) in 2025. The old version will be replaced.  
Purpose :

- ▶ Stands for "Product Safety for Children's Products" and is part of the Consumer Product Safety Act (CPSA)

Scope :

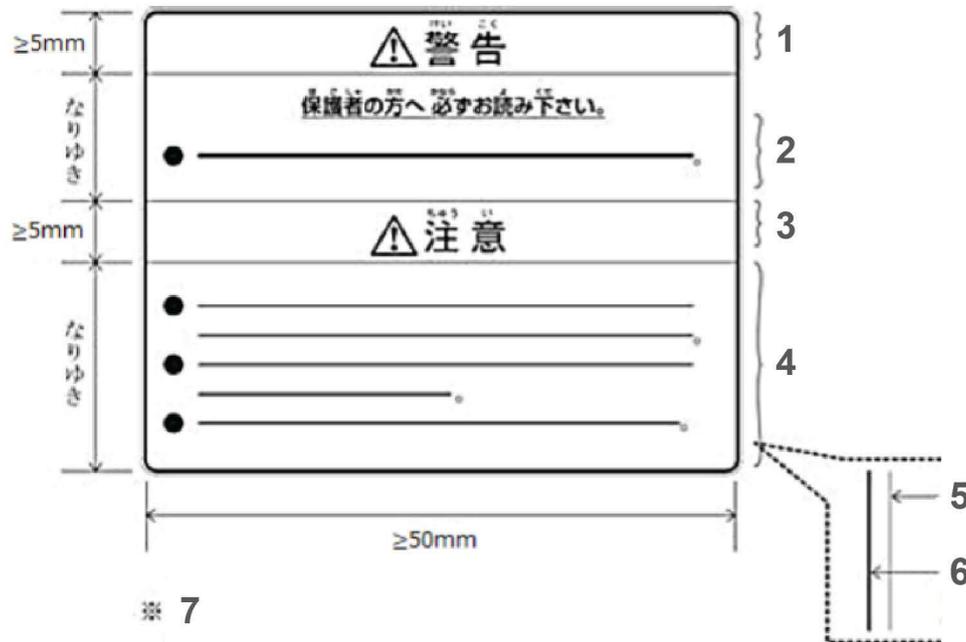
- ▶ Specifically for children's products, especially those designed for children under 3 years old



子供PSCマーク

### ST Warning

#### 【Basic Format】



※ 7

8 ルビの潰れや商品の大きさなどにより、表記は「警告」「警告(けいこく)」「注意」「注意(ちゅうい)」とする。

1. For 4C printing, the words 警告 must be in **Black**; background must be **Orange**. (For 1C printing, the words 警告 must be in White on a Black background.)
2. For 4C printing, background must be **Bronze-Red**. (For 1C printing, Black font.)
3. For 4C printing, the words 注意 must be in Black; background must be **Yellow**. (For 1C printing, the words 注意 must be in White on a Black background.)
4. A Level, B Level must be in the same Black font. (No need for differential font size.)
5. Outer edge line = 0.1mm (Line Style: Children's Rule / Atari Rule.)
6. Inner edge line = 0.5mm (Must have White Space between Outer & Inner edge lines.)
7. The signal words 警告 and 注意 must include phonetic guides (けいこく;ちゅうい).
8. Notations [警告; 注意 or 警告(けいこく); 注意(ちゅうい)] can be used according to package size, and margin size, etc.

### CCC Requirements

- ▶ Toy labels shall be in Simplified Chinese for all text
- ▶ The height of the word “警告” or “注意” shall be **at least Chinese “Bold Font No. 4” (4.5 x 4.5mm)**
- ▶ The remaining statements shall be **at least Chinese “Bold Font No. 5” (3.2 x 3.2mm)**
- ▶ CCC Mark printing standards shall be in Black on a White background
- ▶ If applied directly onto products (i.e., Casting, Engraving, Etching, Sew-In, or Sprayed), the CCC Mark shall be permanent. CCC Mark and background colour can be changed by product design

Toy labels need to contain the following information:

- Product name
- Model number
- Product code
- Age grade
- Safety warning
- Material name and content for soft toys
- Instruction for safety use and assembly
- Maintenance
- Period for safety use (If applicable)
- The name and address of the producer and distributor

产品名称: 魔术蛋  
 产品型号: AX-1  
 主要成份: 面料-100%棉 填充料-100%聚酯纤维  
 适用年龄范围: 3 岁以上  
 使用方法: 手持摇摆  
 维护和保养: 手洗, 风干  
 生产工厂: 环宇玩具制品厂  
 生产工厂地址: 广东省东莞市 XXX 路 68 号  
 销售商(或进口商): 大发贸易公司  
 销售商(或进口商)地址: 广东省东莞市 XXX 路 28 号  
 执行标准: GB6675.1-2014, GB6675.2-2014, GB6675.3-2014, GB6675.4-2014, GB19865-2005  
 合格证

玩具要由成人组装  
 该包装含有重要信息必须给予保留

**警告! 不适合 3 岁以下儿童使用。内含小零件。**

The product's name and item number must same with application information

Applicable to plush, stuffing toy.

If necessary.

Applicable to electric toy or plush toys should provide maintenance/cleaning method.

Manufacturer name and address must match the content in the business license.

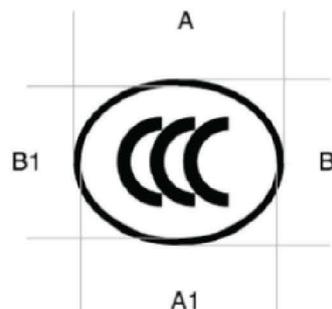
Importer information is applicable for imported products only.

GB19865 for electric toy only.

Applicable for adult assembly toy.

#### CCC Mark Standards

The CCC mark is categorised as "Standard CCC mark" and "Non-Standard CCC mark". CCC mark shall be oval-shaped with circumference proportions 8:6:3, as shown below:



| Marking     | A | A1  | B   | B1  |
|-------------|---|-----|-----|-----|
| Proportions | 8 | 7.5 | 6.3 | 5.8 |

# STC GLOBAL NETWORK

## CHINA

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www.stc.group



HKTODB2601E\_GD202603

## TEST REQUISITION PROCEDURE

1. Download Test Requisition Form from



2. Send the sample(s) to STC

3. STC confirms receipt of sample(s) (Quotation to be provided on request)

4. Test starts upon confirmation of Quotation

5. Report sent to Customer