



## Test Report

**Date** : 2022-02-22  
**No.** : HP22020087

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**Applicant** : Yoshiritsu Co., Ltd.  
1563 Koshibe, Oyodo Yoshino, Nara 638-0803 Japan

Attn: Akie Kawai

**Description of Samples** : Two styles of submitted sample each in one set said to be :  
Name of Parts :  
LaQ RED No.1-7  
LaQ BLUE No.1-7  
LaQ YELLOW No.1-7  
LaQ GREEN No.1-7  
LaQ PINK No.1-7  
LaQ SKY BLUE No.1-7  
LaQ ORANGE No.1-7  
LaQ LIME No.1-7  
LaQ WHITE No.1-7  
LaQ BLACK No.1-7  
LaQ BROWN No.1-7  
LaQ GRAY No.1-7  
LaQ LAVENDER No.1-7  
LaQ CLEAR No.1-7  
LaQ CLEAR RED No.1-7  
LaQ CLEAR BLUE No.1-7  
LaQ CLEAR YELLOW No.1-7  
LaQ HAMACRON CONSTRUCTOR WHEEL  
LaQ HAMACRON CONSTRUCTOR SHAFT  
LaQ HAMACRON CONTRSUCTOR MIDDLE SIZE WHEEL  
LaQ HAMACRON CONSTRUCTOR LONG SHAFT  
LaQ HAMACRON CONSTRUCTOR MINI WHEEL  
LaQ HAMACRON CONSTRUCTOR MINI SHAFT  
LaQ BALL JOINT A and B  
LaQ CROSS PART  
LaQ PARTS REMOVER  
BLISTER CASE BLUE  
BLISTER CASE PINK  
PLASTIC CONTAINER (SMALL)  
PLASTIC CONATINER (LARGE)

WONG Wing-cheung, Benny  
Authorized Signatory



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**Description of Samples** : Item Name  
(A) LaQ BALL JOINT TECHNIQUES  
JAN Code: 4952907007759  
(B) LaQ ANIMAL WORLD CAPYBARA & SEAL  
JAN Code: 4952907007742

Labelled Age Grading : Age 5 years and up  
Appropriate Age Grade : Age 5 years and up  
Client's Requested Age Grading : Age 5 years and up  
Tested Age Grade : Age 5 years and up  
Country of Origin : Japan

**Date Samples Received** : 2022-02-11

**Date Tested** : 2022-02-11 to 2022-02-15

<b>Test Requested</b>	<b>Test Item</b>	<b>Result</b>
I.	EN71 : Part 1 : 2014 + A1 : 2018 - Physical and Mechanical Properties	Passed
II.	EN71 : Part 2 : 2020 - Flammability test	Passed
III.	EN 71-3:2019+A1:2021 - Migration of certain elements (Aluminium, Antimony, Arsenic, Barium, Boron, Cadmium, Chromium (III), Chromium (VI), Cobalt, Copper, Lead, Manganese, Mercury, Nickel, Selenium, Strontium, Tin, Organic Tin and Zinc).	Passed
IV.	Regulation (EC) No. 1907/2006 of the European Parliament and of the Council, Annex XVII, Entry 23 and its amendment Regulation (EU) No. 494/2011 and No. 835/2012 - Cadmium content (formerly Directive 91/338/EEC)	Passed

  
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	<u>Test Item</u>	<u>Result</u>
V.	European Regulation (EU) No. 1907/2006(REACH) Annex XVII Entry 51 & 52 and its amendment Commission Regulation (EU) 2018/2005 — Phthalate content.	Passed
VI.	ASTM F963-17	
	- Physical and Mechanical Tests	Passed
	- Flammability Test	Passed
	- Heavy Elements Test (Clause 4.3.5)	Passed
VII.	Lead content in accordance with U.S. Consumer Product Safety Improvement Act of 2008 - Sec. 101 : Children's Products Containing Lead; Lead Paint Rule	Passed
VIII.	Phthalates content as required by section 108, USA Consumer Product Safety Improvement Act and 16 CFR 1307 and 15 U.S. Code § 2057c.	Passed

Test Result : Refer to the result pages for details.

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### Test Results :

#### I. EN71 : Part 1 : 2014 + A1 : 2018

<u>Applicable clause</u>	<u>Description</u>	<u>Result</u>
4	<u>General requirements</u>	
4.1	Material cleanliness	Pass
4.7	Edges	Pass
4.8	Points and metallic wires	Pass
6	Packaging	Pass
7	<u>Warnings, markings and instructions for use</u>	* <sup>1</sup>
7.1	General	Pass
7.2	Toys not intended for children under 36 months	Pass

\*<sup>1</sup> = The manufacturer or his authorized representative or the importer into the community shall in a visible, easily legible and indelible form affix his name and/or trade name and/or mark and address on the toy or on its packaging.

Note: For numerical result with upper[lower] limit, compliance is deemed to occur if the measured result is under[above] the upper[lower] limit, even when extended upwards [downwards] by the expanded uncertainty with 95% coverage probability.

#### II. EN71 : Part 2 : 2020

<u>Applicable clause</u>	<u>Title/Description</u>	<u>Result</u>
4.1	General requirements	Pass

Note : No cellulose nitrate and material with same behaviour in fire was detected.

Note: For numerical result with upper[lower] limit, compliance is deemed to occur if the measured result is under[above] the upper[lower] limit, even when extended upwards [downwards] by the expanded uncertainty with 95% coverage probability.

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**III. EN 71-3:2019+A1:2021**

Test Method: Heavy element analysis was determined by Inductively Coupled Plasma Spectrometry (ICP-OES) and/or Inductively Coupled Plasma Mass Spectrometry (ICP-MS) and/or Gas Chromatography Mass Spectrometry (GCMS).

Category III – Scraped-off toy material

Element	Migration limit (mg/kg)	Result (mg/kg)					
		Sample					
		1	2	3	4	5	6
Aluminium (Al)	28130	6	10	ND	ND	ND	ND
Antimony (Sb)	560	ND	ND	ND	ND	ND	ND
Arsenic (As)	47	ND	ND	ND	ND	ND	ND
Barium (Ba)	18,750	ND	ND	ND	ND	ND	ND
Boron (B)	15,000	ND	ND	ND	ND	ND	ND
Cadmium (Cd)	17	ND	ND	ND	ND	ND	ND
Chromium (III)	460	0.142	0.076	BL	BL	BL	BL
Chromium (VI)	0.053	0.027	ND	BL	BL	BL	BL
Cobalt (Co)	130	12	ND	ND	ND	ND	ND
Copper (Cu)	7,700	ND	ND	ND	ND	ND	ND
Lead (Pb)	23	ND	ND	ND	ND	ND	ND
Manganese (Mn)	15,000	15	7	ND	ND	ND	ND
Mercury (Hg)	94	ND	ND	ND	ND	ND	ND
Nickel (Ni)	930	ND	ND	ND	ND	ND	ND
Selenium (Se)	460	ND	ND	ND	ND	ND	ND
Strontium (Sr)	56,000	42	36	ND	ND	ND	ND
Tin (Sn)	180,000	ND	ND	ND	ND	ND	ND
Organic tin <sup>#</sup>	12	ND	ND	ND	ND	ND	ND
Zinc (Zn)	46,000	ND	ND	ND	ND	ND	ND

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Test Method: Heavy element analysis was determined by Inductively Coupled Plasma Spectrometry (ICP-OES) and/or Inductively Coupled Plasma Mass Spectrometry (ICP-MS) and/or Gas Chromatography Mass Spectrometry (GCMS).

Category III – Scraped-off toy material

Element	Migration limit (mg/kg)	Result (mg/kg)					
		Sample					
		7	8	9	10	11	12
Aluminium (Al)	28130	ND	ND	ND	ND	ND	ND
Antimony (Sb)	560	ND	ND	ND	ND	ND	ND
Arsenic (As)	47	ND	ND	ND	ND	ND	ND
Barium (Ba)	18,750	ND	ND	ND	ND	ND	ND
Boron (B)	15,000	ND	ND	ND	ND	ND	ND
Cadmium (Cd)	17	ND	ND	ND	ND	ND	ND
Chromium (III)	460	BL	BL	BL	BL	BL	BL
Chromium (VI)	0.053	BL	BL	BL	BL	BL	BL
Cobalt (Co)	130	ND	ND	ND	ND	ND	ND
Copper (Cu)	7,700	ND	ND	ND	ND	ND	ND
Lead (Pb)	23	ND	ND	ND	ND	ND	ND
Manganese (Mn)	15,000	ND	ND	ND	ND	ND	ND
Mercury (Hg)	94	ND	ND	ND	ND	ND	ND
Nickel (Ni)	930	ND	ND	ND	ND	ND	ND
Selenium (Se)	460	ND	ND	ND	ND	ND	ND
Strontium (Sr)	56,000	ND	ND	ND	ND	ND	ND
Tin (Sn)	180,000	ND	ND	ND	ND	ND	ND
Organic tin <sup>#</sup>	12	ND	ND	ND	ND	ND	ND
Zinc (Zn)	46,000	ND	ND	ND	ND	ND	ND

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Test Method: Heavy element analysis was determined by Inductively Coupled Plasma Spectrometry (ICP-OES) and/or Inductively Coupled Plasma Mass Spectrometry (ICP-MS) and/or Gas Chromatography Mass Spectrometry (GCMS).

Category III – Scraped-off toy material

Element	Migration limit (mg/kg)	Result (mg/kg)					
		Sample					
		13	14	15	16	17	18
Aluminium (Al)	28130	ND	ND	ND	ND	ND	ND
Antimony (Sb)	560	ND	ND	ND	ND	ND	ND
Arsenic (As)	47	ND	ND	ND	ND	ND	ND
Barium (Ba)	18,750	ND	ND	ND	ND	ND	ND
Boron (B)	15,000	ND	ND	ND	ND	ND	ND
Cadmium (Cd)	17	ND	ND	ND	ND	ND	ND
Chromium (III)	460	BL	BL	BL	BL	BL	BL
Chromium (VI)	0.053	BL	BL	BL	BL	BL	BL
Cobalt (Co)	130	ND	ND	ND	ND	ND	ND
Copper (Cu)	7,700	ND	ND	ND	ND	ND	ND
Lead (Pb)	23	ND	ND	ND	ND	ND	ND
Manganese (Mn)	15,000	ND	ND	ND	ND	ND	ND
Mercury (Hg)	94	ND	ND	ND	ND	ND	ND
Nickel (Ni)	930	ND	ND	ND	ND	ND	ND
Selenium (Se)	460	ND	ND	ND	ND	ND	ND
Strontium (Sr)	56,000	ND	ND	ND	ND	ND	ND
Tin (Sn)	180,000	ND	ND	ND	ND	ND	ND
Organic tin <sup>#</sup>	12	0.4	ND	ND	ND	0.4	ND
Zinc (Zn)	46,000	ND	ND	ND	ND	ND	ND

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Category III – Scraped-off toy material

Element	Migration limit (mg/kg)	Result (mg/kg)					
		Sample					
		19	20	21	22	23	24
Aluminium (Al)	28130	ND	ND	ND	ND	ND	ND
Antimony (Sb)	560	ND	ND	ND	ND	ND	ND
Arsenic (As)	47	ND	ND	ND	ND	ND	ND
Barium (Ba)	18,750	ND	ND	ND	ND	ND	ND
Boron (B)	15,000	ND	ND	ND	ND	ND	ND
Cadmium (Cd)	17	ND	ND	ND	ND	ND	ND
Chromium (III)	460	BL	BL	BL	BL	BL	BL
Chromium (VI)	0.053	BL	BL	BL	BL	BL	BL
Cobalt (Co)	130	ND	ND	ND	ND	ND	ND
Copper (Cu)	7,700	ND	ND	ND	ND	ND	ND
Lead (Pb)	23	ND	ND	ND	ND	ND	ND
Manganese (Mn)	15,000	ND	ND	ND	ND	ND	ND
Mercury (Hg)	94	ND	ND	ND	ND	ND	ND
Nickel (Ni)	930	ND	ND	ND	ND	ND	ND
Selenium (Se)	460	ND	ND	ND	ND	ND	ND
Strontium (Sr)	56,000	ND	ND	ND	ND	ND	ND
Tin (Sn)	180,000	ND	ND	ND	ND	ND	ND
Organic tin <sup>#</sup>	12	0.4	ND	ND	ND	0.3	0.4
Zinc (Zn)	46,000	ND	ND	ND	ND	ND	ND

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Category III – Scraped-off toy material

Element	Migration limit (mg/kg)	Result (mg/kg)					
		Sample					
		25	26	27	28	29	30
Aluminium (Al)	28130	ND	ND	ND	ND	ND	ND
Antimony (Sb)	560	ND	ND	ND	ND	ND	ND
Arsenic (As)	47	ND	ND	ND	ND	ND	ND
Barium (Ba)	18,750	ND	ND	ND	ND	ND	ND
Boron (B)	15,000	ND	ND	ND	ND	ND	ND
Cadmium (Cd)	17	ND	ND	ND	ND	ND	ND
Chromium (III)	460	BL	BL	BL	BL	BL	BL
Chromium (VI)	0.053	BL	BL	BL	BL	BL	BL
Cobalt (Co)	130	ND	ND	ND	ND	ND	ND
Copper (Cu)	7,700	ND	ND	ND	ND	ND	ND
Lead (Pb)	23	ND	ND	ND	ND	ND	ND
Manganese (Mn)	15,000	ND	ND	ND	ND	ND	ND
Mercury (Hg)	94	ND	ND	ND	ND	ND	ND
Nickel (Ni)	930	ND	ND	ND	ND	ND	ND
Selenium (Se)	460	ND	ND	ND	ND	ND	ND
Strontium (Sr)	56,000	ND	ND	ND	ND	ND	ND
Tin (Sn)	180,000	ND	ND	ND	ND	0.2	ND
Organic tin <sup>#</sup>	12	0.3	ND	ND	0.3	0.5	ND
Zinc (Zn)	46,000	ND	ND	ND	ND	ND	ND

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Category III – Scraped-off toy material

Element	Migration limit (mg/kg)	Result (mg/kg)					
		Sample					
		31	32	33	34	35	36
Aluminium (Al)	28130	ND	ND	ND	ND	ND	ND
Antimony (Sb)	560	ND	ND	ND	ND	ND	ND
Arsenic (As)	47	ND	ND	ND	ND	ND	ND
Barium (Ba)	18,750	ND	ND	ND	ND	ND	ND
Boron (B)	15,000	ND	ND	ND	ND	ND	ND
Cadmium (Cd)	17	ND	ND	ND	ND	ND	ND
Chromium (III)	460	BL	BL	BL	BL	BL	BL
Chromium (VI)	0.053	BL	BL	BL	BL	BL	BL
Cobalt (Co)	130	ND	ND	ND	ND	ND	ND
Copper (Cu)	7,700	ND	ND	ND	ND	ND	ND
Lead (Pb)	23	ND	ND	ND	ND	ND	ND
Manganese (Mn)	15,000	ND	ND	ND	ND	ND	ND
Mercury (Hg)	94	ND	ND	ND	ND	ND	ND
Nickel (Ni)	930	ND	ND	ND	ND	ND	ND
Selenium (Se)	460	ND	ND	ND	ND	ND	ND
Strontium (Sr)	56,000	ND	ND	ND	ND	ND	ND
Tin (Sn)	180,000	ND	ND	ND	ND	0.4	ND
Organic tin <sup>#</sup>	12	ND	ND	ND	ND	0.9	ND
Zinc (Zn)	46,000	ND	ND	ND	ND	ND	ND

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Category III – Scraped-off toy material

Element	Migration limit (mg/kg)	Result (mg/kg)					
		Sample					
		37	38	39	40	41	42
Aluminium (Al)	28130	ND	6	ND	ND	ND	10
Antimony (Sb)	560	ND	ND	ND	ND	ND	ND
Arsenic (As)	47	ND	ND	ND	ND	ND	ND
Barium (Ba)	18,750	ND	ND	ND	ND	ND	ND
Boron (B)	15,000	ND	ND	ND	ND	ND	ND
Cadmium (Cd)	17	ND	ND	ND	ND	ND	ND
Chromium (III)	460	BL	BL	BL	BL	BL	BL
Chromium (VI)	0.053	BL	BL	BL	BL	BL	BL
Cobalt (Co)	130	ND	ND	ND	ND	ND	ND
Copper (Cu)	7,700	ND	ND	ND	ND	ND	ND
Lead (Pb)	23	ND	ND	ND	ND	ND	ND
Manganese (Mn)	15,000	ND	ND	ND	ND	ND	ND
Mercury (Hg)	94	ND	ND	ND	ND	ND	ND
Nickel (Ni)	930	ND	ND	ND	ND	ND	ND
Selenium (Se)	460	ND	ND	ND	ND	ND	ND
Strontium (Sr)	56,000	ND	ND	ND	ND	ND	ND
Tin (Sn)	180,000	ND	0.2	ND	ND	ND	ND
Organic tin <sup>#</sup>	12	ND	0.5	ND	ND	ND	ND
Zinc (Zn)	46,000	ND	ND	ND	ND	ND	ND

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Category III – Scraped-off toy material

Element	Migration limit (mg/kg)	Result (mg/kg)					
		Sample					
		43	44	45	46	47	48
Aluminium (Al)	28130	ND	ND	6	ND	ND	ND
Antimony (Sb)	560	ND	ND	ND	ND	ND	ND
Arsenic (As)	47	ND	ND	ND	ND	ND	ND
Barium (Ba)	18,750	ND	ND	ND	ND	ND	ND
Boron (B)	15,000	ND	ND	ND	ND	ND	ND
Cadmium (Cd)	17	ND	ND	ND	ND	ND	ND
Chromium (III)	460	BL	BL	BL	BL	BL	BL
Chromium (VI)	0.053	BL	BL	BL	BL	BL	BL
Cobalt (Co)	130	ND	ND	ND	ND	ND	ND
Copper (Cu)	7,700	ND	ND	ND	ND	ND	ND
Lead (Pb)	23	ND	ND	ND	ND	ND	ND
Manganese (Mn)	15,000	ND	ND	ND	ND	ND	ND
Mercury (Hg)	94	ND	ND	ND	ND	ND	ND
Nickel (Ni)	930	ND	ND	ND	ND	ND	ND
Selenium (Se)	460	ND	ND	ND	ND	ND	ND
Strontium (Sr)	56,000	ND	ND	ND	ND	ND	ND
Tin (Sn)	180,000	ND	ND	ND	ND	ND	0.3
Organic tin <sup>#</sup>	12	0.2	ND	0.4	0.5	0.3	0.7
Zinc (Zn)	46,000	ND	ND	ND	ND	ND	ND

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Category III – Scraped-off toy material

Element	Migration limit (mg/kg)	Result (mg/kg)		
		Sample		
		49	50	51
Aluminium (Al)	28130	ND	ND	ND
Antimony (Sb)	560	ND	ND	ND
Arsenic (As)	47	ND	ND	ND
Barium (Ba)	18,750	ND	ND	ND
Boron (B)	15,000	ND	ND	ND
Cadmium (Cd)	17	ND	ND	ND
Chromium (III)	460	BL	BL	BL
Chromium (VI)	0.053	BL	BL	BL
Cobalt (Co)	130	ND	ND	ND
Copper (Cu)	7,700	ND	ND	ND
Lead (Pb)	23	ND	ND	ND
Manganese (Mn)	15,000	ND	ND	ND
Mercury (Hg)	94	ND	ND	ND
Nickel (Ni)	930	ND	ND	ND
Selenium (Se)	460	ND	ND	ND
Strontium (Sr)	56,000	ND	ND	ND
Tin (Sn)	180,000	ND	ND	ND
Organic tin <sup>#</sup>	12	0.3	ND	ND
Zinc (Zn)	46,000	ND	ND	ND

- Note :
- All results are in mg/kg
  - < denotes less than
  - ≥ denotes greater than or equal to
  - For samples of migrated chromium content lower than migration limit of chromium (VI), no speciation test for chromium (III) and chromium (VI) were conducted. The results were derived from that of total chromium
  - For samples of migrated tin content calculated as tributyl tin lower than migration limit of organic tin, no organic tin test was conducted. Organic tin results were derived from that of total tin
  - ND = Not detected
  - BL = Below Limit

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\* The migration limit for Aluminium has been amended by Commission Directive (EU) 2019/1922 and adopted by EN 71-3: 2019+A1: 2021.

For specification with upper limit, compliance is deemed to occur if the measured result is under the limit, even extended upwards by the expanded uncertainty with 95% coverage probability

### III. EN 71-3:2019+A1:2021

#### Category III – Scraped-off toy material

- Note :
- The samples with sample weight less than 100 mg, were assumed to be 100 mg in calculation (except glass/ceramic/metallic materials)
  - <sup>#</sup>Organic tin compounds under investigation are limited to methyltin, butyltin, dibutyltin, tributyltin, tetrabutyltin, monooctyltin, dioctyltin, dipropyltin, diphenyltin and triphenyltin. Other organic tin compounds may also be present in toys

Sample	Description	Sample weight
1	Instruction sheet(#A/#B): red/blue/green/black multicolor coating	≥100 mg
2	Instruction sheet(#A/#B): white paper	≥100 mg
3	Basic parts: red ABS	≥100 mg
4	Basic parts: blue ABS	≥100 mg
5	Basic parts: yellow ABS	≥100 mg
6	Basic parts: green ABS	≥100 mg
7	Basic parts: pink ABS	≥100 mg
8	Basic parts: sky blue ABS	≥100 mg
9	Basic parts: orange ABS	≥100 mg
10	Basic parts: lime ABS	≥100 mg
11	Basic parts: white ABS	≥100 mg
12	Basic parts: black ABS	≥100 mg
13	Basic parts: brown ABS	≥100 mg
14	Basic parts: gray ABS	≥100 mg
15	Basic parts: lavender ABS	≥100 mg
16	Center of middle size wheel: dull white ABS	≥100 mg
17	Basic parts: red POM	≥100 mg
18	Basic parts: blue POM	≥100 mg
19	Basic parts: yellow POM	≥100 mg
20	Basic parts: green POM	≥100 mg
21	Basic parts: pink POM	≥100 mg
22	Basic parts: sky blue POM	≥100 mg
23	Basic parts: orange POM	≥100 mg
24	Basic parts: lime POM	≥100 mg

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III. EN 71-3:2019+A1:2021

Category III – Scraped-off toy material

- Note :
- The samples with sample weight less than 100 mg, were assumed to be 100 mg in calculation (except glass/ceramic/metallic materials)
  - <sup>#</sup>Organic tin compounds under investigation are limited to methyltin, butyltin, dibutyltin, tributyltin, tetrabutyltin, monooctyltin, dioctyltin, dipropyltin, diphenyltin and triphenyltin. Other organic tin compounds may also be present in toys

Sample	Description	Sample weight
25	Basic parts: white POM	≥100 mg
26	Basic parts: black POM	≥100 mg
27	Basic parts: brown POM	≥100 mg
28	Basic parts: gray POM	≥100 mg
29	Basic parts: lavender POM	≥100 mg
30	Wheel: dull gray POM	≥100 mg
31	Shaft/long shaft/mini shaft: dull black POM	≥100 mg
32	Center of mini wheel: dull white POM	≥100 mg
33	Clear parts: transparent PMMA	≥100 mg
34	Clear parts: transparent red PMMA	≥100 mg
35	Clear parts: transparent blue PMMA	≥100 mg
36	Clear parts: transparent yellow PMMA	≥100 mg
37	Clear parts: transparent PC	≥100 mg
38	Clear parts: transparent red PC	≥100 mg
39	Clear parts: transparent blue PC	≥100 mg
40	Clear parts: transparent yellow PC	≥100 mg
41	Tire of middle size wheel/tire of mini wheel: black PE	≥100 mg
42	Ball joint parts: black plastic	≥100 mg
43	Cross parts: red plastic	≥100 mg
44	Cross parts: black plastic	≥100 mg
45	Cross parts: yellow plastic	≥100 mg
46	Cross parts: white plastic	≥100 mg
47	Blister case: blue plastic	≥100 mg
48	Blister case: pink plastic	≥100 mg
49	Large container/small container: translucent white plastic	≥100 mg
50	Handle of large container/handle of small container: white plastic	≥100 mg
51	Cover of large container/cover of small container: translucent blue plastic	≥100 mg

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- IV. Regulation (EC) No. 1907/2006 of the European Parliament and of the Council, Annex XVII, Entry 23 and its amendment  
Regulation (EU) No. 494/2011 and No. 835/2012  
- Cadmium content (formerly Directive 91/338/EEC).

Test Method: Acid digestion followed by Atomic Absorption Spectrophotometry and/or Inductively Coupled Plasma Spectrometry (ICP-OES) analysis.

### For plastic material

	Test item
	Total Cadmium
Maximum permissible level (mg/kg)	100
Sample	
1	<5
2	<5
3,4,5	<5
6,7,8	<5
9,10	<5
11,12,13	<5
14,15,16	<5
17,18,19	<5
20,21,22	<5
23,24,25	<5
26,27,28	<5
29,30,31	<5
32,33,34	<5
35,36,37	<5
38,39,40	<5
41,42,43	<5
44,45,46	<5
47,48	<5
49,50,51	<5

- Note :
- All results are in mg/kg
  - $\leq$  denotes less than
  - # denotes composite sample. The results for composite sample are calculated based on the component with the least weight.
  - For specification with upper limit, compliance is deemed to occur if the measured result is under the limit, even extended upwards by the expanded uncertainty with 95% coverage probability.

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Regulation (EU) No. 494/2011 and No. 835/2012  
- Cadmium content (formerly Directive 91/338/EEC).

Test Method: Acid digestion followed by Atomic Absorption Spectrophotometry and/or Inductively Coupled Plasma Spectrometry (ICP-OES) analysis.

Sample	Description
1	Instruction sheet(#A/#B): red/blue/green/black multicolor coating
2	Instruction sheet(#A/#B): white paper
3	Basic parts: red ABS
4	Basic parts: blue ABS
5	Basic parts: yellow ABS
6	Basic parts: green ABS
7	Basic parts: pink ABS
8	Basic parts: sky blue ABS
9	Basic parts: orange ABS
10	Basic parts: lime ABS
11	Basic parts: white ABS
12	Basic parts: black ABS
13	Basic parts: brown ABS
14	Basic parts: gray ABS
15	Basic parts: lavender ABS
16	Center of middle size wheel: dull white ABS
17	Basic parts: red POM
18	Basic parts: blue POM
19	Basic parts: yellow POM
20	Basic parts: green POM
21	Basic parts: pink POM
22	Basic parts: sky blue POM
23	Basic parts: orange POM
24	Basic parts: lime POM
25	Basic parts: white POM
26	Basic parts: black POM
27	Basic parts: brown POM
28	Basic parts: gray POM
29	Basic parts: lavender POM
30	Wheel: dull gray POM
31	Shaft/long shaft/ mini shaft: dull black POM
32	Center of mini wheel: dull white POM

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Regulation (EU) No. 494/2011 and No. 835/2012  
- Cadmium content (formerly Directive 91/338/EEC).

Test Method: Acid digestion followed by Atomic Absorption Spectrophotometry and/or Inductively Coupled Plasma Spectrometry (ICP-OES) analysis.

Sample	Description
33	Clear parts: transparent PMMA
34	Clear parts: transparent red PMMA
35	Clear parts: transparent blue PMMA
36	Clear parts: transparent yellow PMMA
37	Clear parts: transparent PC
38	Clear parts: transparent red PC
39	Clear parts: transparent blue PC
40	Clear parts: transparent yellow PC
41	Tire of middle size wheel/tire of mini wheel: black PE
42	Ball joint parts: black plastic
43	Cross parts: red plastic
44	Cross parts: black plastic
45	Cross parts: yellow plastic
46	Cross parts: white plastic
47	Blister case: blue plastic
48	Blister case: pink plastic
49	Large container/small container: translucent white plastic
50	Handle of large container/handle of small container: white plastic
51	Cover of large container/cover of small container: translucent blue plastic

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- V. European Regulation (EU) No. 1907/2006(REACH) Annex XVII Entry 51 & 52 and its amendment Commission Regulation (EU) 2018/2005 – Phthalate content.

Test Method: Phthalate analysis was determined by Gas Chromatography.

Sample	Phthalates content, %(w/w)						
	DBP	BBP	DEHP	DIBP	DNOP	DINP	DIDP
1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
2,3,4	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
5,6,7	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
8,9	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
10,11,12	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
13,14,15	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
16,17,18	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
19,20,21	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
22,23,24	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
25,26,27	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
28,29,30	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
31,32,33	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
34,35,36	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
37,38,39	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
40,41,42	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
43,44,45	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
46,47	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
48,49,50	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Limit	Individually or in any combination of the DBP, BBP DEHP and DIBP shall not be equal to or greater than 0.1% by mass of the plasticised material.				The cumulative total of DNOP, DINP and DIDP shall not be greater than 0.1% by mass of the plasticised material.		

**Remark:**

- DBP =Di-n-butyl phthalate
- BBP =Benzyl-n-butyl phthalate
- DEHP = Di (2-ethylhexyl) phthalate
- DIBP = Diisobutyl phthalate
- DNOP = Di-n-octyl phthalate
- DINP = Diisononyl phthalate
- DIDP = Diisodecyl phthalate
- %(w/w) = percentage weight per weight
- Method detection limit = 0.01%(w/w)
- The requirements of DNOP, DINP and DIDP are only applicable on tested material which can be placed in the mouth by children.

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10 Dai Wang Street, Tai Po Industrial Estate, Tai Po, N.T., Hong Kong

Tel: +852 2666 1888 Fax: +852 2664 4353 Email: hkstc@stc.group Website: www.stc.group

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- For specification with upper limit, compliance is deemed to occur if the measured result is under the limit, even extended upwards by the expanded uncertainty with 95% coverage probability.

- Note :
- All results are in % w/w
  - % w/w denotes percentage by weight
  - < denotes less than
  - # denotes composite sample. The results for composite sample are calculated based on the component with the least weight.
  - DEHP = Di (2-ethylhexyl) Phthalate; DBP = Dibutyl Phthalate; BBP = Butyl Benzyl Phthalate; DINP = Diisononyl Phthalate; DIDP = Diisodecyl Phthalate; DNOP = Di-n-octyl Phthalate

- V. Regulation (EC) No. 1907/2006 of the European Parliament and of the Council, Annex XVII  
- Phthalates contents (formerly Directive 2005/84/EC)

Test Method: Phthalate analysis was determined by Gas Chromatography.

Sample	Description
1	Instruction sheet(#A/#B): red/blue/green/black multicolor coating
2	Basic parts: red ABS
3	Basic parts: blue ABS
4	Basic parts: yellow ABS
5	Basic parts: green ABS
6	Basic parts: pink ABS
7	Basic parts: sky blue ABS
8	Basic parts: orange ABS
9	Basic parts: lime ABS
10	Basic parts: white ABS
11	Basic parts: black ABS
12	Basic parts: brown ABS
13	Basic parts: gray ABS
14	Basic parts: lavender ABS
15	Center of middle size wheel: dull white ABS
16	Basic parts: red POM
17	Basic parts: blue POM
18	Basic parts: yellow POM
19	Basic parts: green POM
20	Basic parts: pink POM
21	Basic parts: sky blue POM
22	Basic parts: orange POM

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- V. Regulation (EC) No. 1907/2006 of the European Parliament and of the Council,  
Annex XVII  
- Phthalates contents (formerly Directive 2005/84/EC)

Test Method: Phthalate analysis was determined by Gas Chromatography.

Sample	Description
23	Basic parts: lime POM
24	Basic parts: white POM
25	Basic parts: black POM
26	Basic parts: brown POM
27	Basic parts: gray POM
28	Basic parts: lavender POM
29	Wheel: dull gray POM
30	Shaft/long shaft/ mini shaft: dull black POM
31	Center of mini wheel: dull white POM
32	Clear parts: transparent PMMA
33	Clear parts: transparent red PMMA
34	Clear parts: transparent blue PMMA
35	Clear parts: transparent yellow PMMA
36	Clear parts: transparent PC
37	Clear parts: transparent red PC
38	Clear parts: transparent blue PC
39	Clear parts: transparent yellow PC
40	Tire of middle size wheel/tire of mini wheel: black PE
41	Ball joint parts: black plastic
42	Cross parts: red plastic
43	Cross parts: black plastic
44	Cross parts: yellow plastic
45	Cross parts: white plastic
46	Blister case: blue plastic
47	Blister case: pink plastic
48	Large container/small container: translucent white plastic
49	Handle of large container/handle of small container: white plastic
50	Cover of large container/cover of small container: translucent blue plastic

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VI. ASTM F963-17

a. Physical and Mechanical Tests

<u>Applicable clause</u>	<u>Description</u>	<u>Result</u>
4.1	Material Quality – Visual Inspection	Pass
4.2	Flammability	Pass
4.3	Toxicology	Pass
4.6	<u>Small Objects</u>	
4.6.3	Toys intended for children > 3 years but < 6 years, 16 CFR 1500.19 Small objects labeling requirement	Pass
4.7	Accessible edges 16 CFR 1500.49 Sharp metal or glass edges	Pass
4.9	Accessible points 16 CFR 1500.48 Sharp points	Pass
4.12	Plastic film	Pass
5	<u>Labeling requirements</u>	Pass
5.1	Federal government requirements	Pass
5.2	Age grading labeling	Pass
5.3	Safety labeling requirements	Pass
5.11	Small objects, small balls, marbles, and balloons 16 CFR 1500.19	Pass
7	<u>Producer's markings</u>	
7.1	Producer's markings	Pass

Remark : The sample(s) were subjected to the normal use and abuse tests in according with Clause 8.5 Normal Use Testing, 8.7 Impact test, 8.8 Torque test, 8.9 Tension test, 8.10 Compression test and 8.12 Flexure test whichever was applicable.

Use and abuse test criteria:

Note: For numerical result with upper[lower] limit, compliance is deemed to occur if the measured result is under[above] the upper[lower] limit, even when extended upwards [downwards] by the expanded uncertainty with 95% coverage probability.

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Test	Age Category, months	Test Parameters	16 CFR Reference
Drop test	0 to 18	10 x 4.5 ft	1500.51(b)(3)
	over 18 to 36	4 x 3 ft	1500.52(b)(3)
	over 36 to 96	4 x 3 ft	1500.53(b)(3)
Tip over test	-	3 times	1500.51/52/53 (b)(4)
Tumble test	-	2 x 4 attitudes	-
Steel ball impact test	-	50 inches	-
Torque test	0 to 18	2 in-lbf	1500.51(e)
	over 18 to 36	3 in-lbf	1500.52(e)
	over 36 to 96	4 in-lbf	1500.53(e)
Tension test	0 to 18	10 lbf	1500.51(f)
	over 18 to 36	15 lbf	1500.52(f)
	over 36 to 96	15 lbf	1500.53(f)
Compression test	0 to 18	20 lbf	1500.51(g)
	over 18 to 36	25 lbf	1500.52(g)
	over 36 to 96	30 lbf	1500.53(g)
Flexure test	0 to 18	120 x 30 cycles (10 lbf)	1500.51(d)
	over 18 to 36	120 x 30 cycles (15 lbf)	1500.52(d)
	over 36 to 96	120 x 30 cycles (15 lbf)	1500.53(d)

### b. Flammability Test

<u>Applicable clause</u>	<u>Description</u>	<u>Result</u>
4.2	Flammability Materials other than textiles (16 CFR 1500.3 (c) (6) (vi)) Test method : Annex A5 (16 CFR 1500.44)	Pass



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### VI. ASTM F963-17

Heavy element (in composite condition)

Ref.: ASTM F963-17 Section 4.3.5

Method: ASTM F963-17 Section 8.3

Determined by: Inductively Coupled Argon Plasma Atomic Emission Spectrophotometer

	Test Item
	Total Lead
Permissible Limit (ppm)	100(**)
Sample	
1	<10
2,3,4	<10
5,6,7	<10
8,9	<10
10,11,12	<10
13,14,15	<10
16,17,18	<10
19,20,21	<10
22,23,24	<10
25,26,27	<10
28,29,30	<10
31,32,33	<10
34,35,36	<10
37,38,39	<10
40,41,42	<10
43,44,45	<10
46,47	<10
48,49,50	<10

Note : (\*\*) 100 ppm limit applies to product produced on or after 14 Aug 2011

- All results are in ppm
- $\leq$  denotes less than
- # denotes composite sample. The results for composite sample are calculated based on the component with the least weight.
- For specification with upper limit, compliance is deemed to occur if the measured result is under the limit, even extended upwards by the expanded uncertainty with 95% coverage probability.

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10 Dai Wang Street, Tai Po Industrial Estate, Tai Po, N.T., Hong Kong

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**VI.** ASTM F963-17

Heavy element

Ref.: ASTM F963-17 Section 4.3.5

Method: ASTM F963-17 Section 8.3

Determined by: Inductively Coupled Argon Plasma Atomic Emission Spectrophotometer

Sample	Description
1	Instruction sheet(#A/#B): white paper
2	Basic parts: red ABS
3	Basic parts: blue ABS
4	Basic parts: yellow ABS
5	Basic parts: green ABS
6	Basic parts: pink ABS
7	Basic parts: sky blue ABS
8	Basic parts: orange ABS
9	Basic parts: lime ABS
10	Basic parts: white ABS
11	Basic parts: black ABS
12	Basic parts: brown ABS
13	Basic parts: gray ABS
14	Basic parts: lavender ABS
15	Center of middle size wheel: dull white ABS
16	Basic parts: red POM
17	Basic parts: blue POM
18	Basic parts: yellow POM
19	Basic parts: green POM
20	Basic parts: pink POM
21	Basic parts: sky blue POM
22	Basic parts: orange POM
23	Basic parts: lime POM
24	Basic parts: white POM
25	Basic parts: black POM
26	Basic parts: brown POM
27	Basic parts: gray POM
28	Basic parts: lavender POM
29	Wheel: dull gray POM

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VI. ASTM F963-17

Heavy element

Ref.: ASTM F963-17 Section 4.3.5

Method: ASTM F963-17 Section 8.3

Determined by: Inductively Coupled Argon Plasma Atomic Emission Spectrophotometer

Sample	Description
30	Shaft/long shaft/ mini shaft: dull black POM
31	Center of mini wheel: dull white POM
32	Clear parts: transparent PMMA
33	Clear parts: transparent red PMMA
34	Clear parts: transparent blue PMMA
35	Clear parts: transparent yellow PMMA
36	Clear parts: transparent PC
37	Clear parts: transparent red PC
38	Clear parts: transparent blue PC
39	Clear parts: transparent yellow PC
40	Tire of middle size wheel/tire of mini wheel: black PE
41	Ball joint parts: black plastic
42	Cross parts: red plastic
43	Cross parts: black plastic
44	Cross parts: yellow plastic
45	Cross parts: white plastic
46	Blister case: blue plastic
47	Blister case: pink plastic
48	Large container/small container: translucent white plastic
49	Handle of large container/handle of small container: white plastic
50	Cover of large container/cover of small container: translucent blue plastic

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## Test Report

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Heavy element

Ref.: ASTM F963-17 Section 4.3.5

Method: ASTM F963-17 Section 8.3

Determined by: Inductively Coupled Argon Plasma Atomic Emission Spectrophotometer

	Test Item
	Total Lead
Permissible Limit (ppm)	90(**)
Sample	
1	<10

Note : (\*\*) 90 ppm limit applies to product produced on or after 14 Aug 2011

- All results are in ppm
- < denotes less than
- # denotes composite sample. The results for composite sample are calculated based on the component with the least weight.
- For specification with upper limit, compliance is deemed to occur if the measured result is under the limit, even extended upwards by the expanded uncertainty with 95% coverage probability.

VI. ASTM F963-17

Heavy element

Ref.: ASTM F963-17 Section 4.3.5

Method: ASTM F963-17 Section 8.3

Determined by: Inductively Coupled Argon Plasma Atomic Emission Spectrophotometer

Sample	Description
1	Instruction sheet(#A/#B): red/blue/green/black multicolor coating

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VI. ASTM F963-17

Heavy element

Ref.: ASTM F963-17 Section 4.3.5

Method: ASTM F963-17 Section 8.3

Determined by: Inductively Coupled Argon Plasma Atomic Emission Spectrophotometer

	Test Item							
	As	Hg	Se	Cd	Sb	Pb	Cr	Ba
Maximum Permissible Level (ppm)	25	60	500	75	60	90	60	1000
Sample								
1	<5	<5	<5	<5	<5	<5	<5	<20
2	<5	<5	<5	<5	<5	<5	<5	<20
3	<5	<5	<5	<5	<5	<5	<5	<20
4	<5	<5	<5	<5	<5	<5	<5	<20
5	<5	<5	<5	<5	<5	<5	<5	<20
6	<5	<5	<5	<5	<5	<5	<5	<20
7	<5	<5	<5	<5	<5	<5	<5	<20
8	<5	<5	<5	<5	<5	<5	<5	<20
9	<5	<5	<5	<5	<5	<5	<5	<20
10	<5	<5	<5	<5	<5	<5	<5	<20
11	<5	<5	<5	<5	<5	<5	<5	<20
12	<5	<5	<5	<5	<5	<5	<5	<20
13	<5	<5	<5	<5	<5	<5	<5	<20
14	<5	<5	<5	<5	<5	<5	<5	<20
15	<5	<5	<5	<5	<5	<5	<5	<20
16	<5	<5	<5	<5	<5	<5	<5	<20
17	<5	<5	<5	<5	<5	<5	<5	<20
18	<5	<5	<5	<5	<5	<5	<5	<20
19	<5	<5	<5	<5	<5	<5	<5	<20
20	<5	<5	<5	<5	<5	<5	<5	<20
21	<5	<5	<5	<5	<5	<5	<5	<20
22	<5	<5	<5	<5	<5	<5	<5	<20
23	<5	<5	<5	<5	<5	<5	<5	<20
24	<5	<5	<5	<5	<5	<5	<5	<20
25	<5	<5	<5	<5	<5	<5	<5	<20
26	<5	<5	<5	<5	<5	<5	<5	<20
27	<5	<5	<5	<5	<5	<5	<5	<20

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### VI. ASTM F963-17

#### Heavy element

Ref.: ASTM F963-17 Section 4.3.5

Method: ASTM F963-17 Section 8.3

Determined by: Inductively Coupled Argon Plasma Atomic Emission Spectrophotometer

	Test Item							
	As	Hg	Se	Cd	Sb	Pb	Cr	Ba
Maximum Permissible Level (ppm)	25	60	500	75	60	90	60	1000
Sample								
28	<5	<5	<5	<5	<5	<5	<5	<20
29	<5	<5	<5	<5	<5	<5	<5	<20
30	<5	<5	<5	<5	<5	<5	<5	<20
31	<5	<5	<5	<5	<5	<5	<5	<20
32	<5	<5	<5	<5	<5	<5	<5	<20
33	<5	<5	<5	<5	<5	<5	<5	<20
34	<5	<5	<5	<5	<5	<5	<5	<20
35	<5	<5	<5	<5	<5	<5	<5	<20
36	<5	<5	<5	<5	<5	<5	<5	<20
37	<5	<5	<5	<5	<5	<5	<5	<20
38	<5	<5	<5	<5	<5	<5	<5	<20
39	<5	<5	<5	<5	<5	<5	<5	<20
40	<5	<5	<5	<5	<5	<5	<5	<20
41	<5	<5	<5	<5	<5	<5	<5	<20
42	<5	<5	<5	<5	<5	<5	<5	<20
43	<5	<5	<5	<5	<5	<5	<5	<20
44	<5	<5	<5	<5	<5	<5	<5	<20
45	<5	<5	<5	<5	<5	<5	<5	<20
46	<5	<5	<5	<5	<5	<5	<5	<20
47	<5	<5	<5	<5	<5	<5	<5	<20
48	<5	<5	<5	<5	<5	<5	<5	<20
49	<5	<5	<5	<5	<5	<5	<5	<20
50	<5	<5	<5	<5	<5	<5	<5	<20
51	<5	<5	<5	<5	<5	<5	<5	<20

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- Note :
- All results are in ppm
  - ppm denotes part per million by weight
  - < denotes less than
  - ≥ denotes greater than or equal to
  - As = Arsenic; Hg = Mercury; Se = Selenium; Cd = Cadmium; Sb = Antimony; Pb = Lead; Cr = Chromium; Ba = Barium
  - For specification with upper limit, compliance is deemed to occur if the measured result is under the limit, even extended upwards by the expanded uncertainty with 95% coverage probability.

### VI. ASTM F963-17

#### Heavy element

Ref.: ASTM F963-17 Section 4.3.5

Method: ASTM F963-17 Section 8.3

Determined by: Inductively Coupled Argon Plasma Atomic Emission Spectrophotometer

Sample	Description	Sample weight
1	Instruction sheet(#A/#B): red/blue/green/black multicolor coating	≥100 mg
2	Instruction sheet(#A/#B): white paper	≥100 mg
3	Basic parts: red ABS	≥100 mg
4	Basic parts: blue ABS	≥100 mg
5	Basic parts: yellow ABS	≥100 mg
6	Basic parts: green ABS	≥100 mg
7	Basic parts: pink ABS	≥100 mg
8	Basic parts: sky blue ABS	≥100 mg
9	Basic parts: orange ABS	≥100 mg
10	Basic parts: lime ABS	≥100 mg
11	Basic parts: white ABS	≥100 mg
12	Basic parts: black ABS	≥100 mg
13	Basic parts: brown ABS	≥100 mg
14	Basic parts: gray ABS	≥100 mg
15	Basic parts: lavender ABS	≥100 mg
16	Center of middle size wheel: dull white ABS	≥100 mg
17	Basic parts: red POM	≥100 mg
18	Basic parts: blue POM	≥100 mg
19	Basic parts: yellow POM	≥100 mg
20	Basic parts: green POM	≥100 mg
21	Basic parts: pink POM	≥100 mg
22	Basic parts: sky blue POM	≥100 mg
23	Basic parts: orange POM	≥100 mg
24	Basic parts: lime POM	≥100 mg

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VI. ASTM F963-17

Heavy element

Ref.: ASTM F963-17 Section 4.3.5

Method: ASTM F963-17 Section 8.3

Determined by: Inductively Coupled Argon Plasma Atomic Emission Spectrophotometer

Sample	Description	Sample weight
25	Basic parts: white POM	≥100 mg
26	Basic parts: black POM	≥100 mg
27	Basic parts: brown POM	≥100 mg
28	Basic parts: gray POM	≥100 mg
29	Basic parts: lavender POM	≥100 mg
30	Wheel: dull gray POM	≥100 mg
31	Shaft/long shaft/ mini shaft: dull black POM	≥100 mg
32	Center of mini wheel: dull white POM	≥100 mg
33	Clear parts: transparent PMMA	≥100 mg
34	Clear parts: transparent red PMMA	≥100 mg
35	Clear parts: transparent blue PMMA	≥100 mg
36	Clear parts: transparent yellow PMMA	≥100 mg
37	Clear parts: transparent PC	≥100 mg
38	Clear parts: transparent red PC	≥100 mg
39	Clear parts: transparent blue PC	≥100 mg
40	Clear parts: transparent yellow PC	≥100 mg
41	Tire of middle size wheel/tire of mini wheel: black PE	≥100 mg
42	Ball joint parts: black plastic	≥100 mg
43	Cross parts: red plastic	≥100 mg
44	Cross parts: black plastic	≥100 mg
45	Cross parts: yellow plastic	≥100 mg
46	Cross parts: white plastic	≥100 mg
47	Blister case: blue plastic	≥100 mg
48	Blister case: pink plastic	≥100 mg
49	Large container/small container: translucent white plastic	≥100 mg
50	Handle of large container/handle of small container: white plastic	≥100 mg
51	Cover of large container/cover of small container: translucent blue plastic	≥100 mg

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**VII.** Children's products containing lead - Total lead content in substrate (in composite condition)

Ref.: CPSIA Sec 101(a) and 15 U.S. Code § 1278a.

Test method: Standard operation procedure for determining total lead (Pb) in non-metal children's products, CPSC-CH-E1002-08.3

Test method: Standard operation procedure for determining total lead (Pb) in metal children's products, CPSC-CH-E1001-08.3

Determined by: Inductively Coupled Argon Plasma Atomic Emission Spectrophotometer

For materials and substrate

	Test Item
	Total Lead
Permissible Limit (mg/kg)	100(*)
Sample	
1	<10
2,3,4	<10
5,6,7	<10
8,9	<10
10,11,12	<10
13,14,15	<10
16,17,18	<10
19,20,21	<10
22,23,24	<10
25,26,27	<10
28,29,30	<10
31,32,33	<10
34,35,36	<10
37,38,39	<10
40,41,42	<10
43,44,45	<10
46,47	<10
48,49,50	<10

- Note : • (\*) 100 ppm limit applies to product produced on or after 14 Aug 2011
- All results are in mg/kg
  - < denotes less than
  - # denotes composite sample. The results for composite sample are calculated based on the component with the least weight.

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- For specification with upper limit, compliance is deemed to occur if the measured result is under the limit, even extended upwards by the expanded uncertainty with 95% coverage probability.

**VII.** Children's products containing lead - Total lead content in substrate

Ref.: CPSIA Sec 101(a) and 15 U.S. Code § 1278a.

Test method: Standard operation procedure for determining total lead (Pb) in non-metal children's products, CPSC-CH-E1002-08.3

Test method: Standard operation procedure for determining total lead (Pb) in metal children's products, CPSC-CH-E1001-08.3

Determined by: Inductively Coupled Argon Plasma Atomic Emission Spectrophotometer

Sample	Description
1	Instruction sheet(#A/#B): white paper
2	Basic parts: red ABS
3	Basic parts: blue ABS
4	Basic parts: yellow ABS
5	Basic parts: green ABS
6	Basic parts: pink ABS
7	Basic parts: sky blue ABS
8	Basic parts: orange ABS
9	Basic parts: lime ABS
10	Basic parts: white ABS
11	Basic parts: black ABS
12	Basic parts: brown ABS
13	Basic parts: gray ABS
14	Basic parts: lavender ABS
15	Center of middle size wheel: dull white ABS
16	Basic parts: red POM
17	Basic parts: blue POM
18	Basic parts: yellow POM
19	Basic parts: green POM
20	Basic parts: pink POM
21	Basic parts: sky blue POM
22	Basic parts: orange POM
23	Basic parts: lime POM
24	Basic parts: white POM
25	Basic parts: black POM
26	Basic parts: brown POM
27	Basic parts: gray POM

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- VII. Children's products containing lead - Total lead content in substrate  
Ref.: CPSIA Sec 101(a) and 15 U.S. Code § 1278a.  
Test method: Standard operation procedure for determining total lead (Pb) in non-metal children's products, CPSC-CH-E1002-08.3  
Test method: Standard operation procedure for determining total lead (Pb) in metal children's products, CPSC-CH-E1001-08.3  
Determined by: Inductively Coupled Argon Plasma Atomic Emission Spectrophotometer

Sample	Description
28	Basic parts: lavender POM
29	Wheel: dull gray POM
30	Shaft/long shaft/ mini shaft: dull black POM
31	Center of mini wheel: dull white POM
32	Clear parts: transparent PMMA
33	Clear parts: transparent red PMMA
34	Clear parts: transparent blue PMMA
35	Clear parts: transparent yellow PMMA
36	Clear parts: transparent PC
37	Clear parts: transparent red PC
38	Clear parts: transparent blue PC
39	Clear parts: transparent yellow PC
40	Tire of middle size wheel/tire of mini wheel: black PE
41	Ball joint parts: black plastic
42	Cross parts: red plastic
43	Cross parts: black plastic
44	Cross parts: yellow plastic
45	Cross parts: white plastic
46	Blister case: blue plastic
47	Blister case: pink plastic
48	Large container/small container: translucent white plastic
49	Handle of large container/handle of small container: white plastic
50	Cover of large container/cover of small container: translucent blue plastic

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- VII. Children's products containing lead - Total lead content in paint and surface coating  
Ref.: CPSIA Sec. 101 (f), 16 CFR 1303 and 15 U.S. Code § 1278a.  
Test method: CPSC-CH-E 1003-09.1  
Determined by: Inductively Coupled Argon Plasma Atomic Emission Spectrophotometer

For surface coating

	Test Item
	Total Lead
Permissible Limit (mg/kg)	90(*)
Sample	
1	<10

- Note : • (\*) 100 ppm limit applies to product produced on or after 14 Aug 2011  
• All results are in mg/kg  
• < denotes less than  
• # denotes composite sample. The results for composite sample are calculated based on the component with the least weight.  
• For specification with upper limit, compliance is deemed to occur if the measured result is under the limit, even extended upwards by the expanded uncertainty with 95% coverage probability.

- VII. Children's products containing lead - Total lead content in paint and surface coating  
Ref.: CPSIA Sec. 101 (f), 16 CFR 1303 and 15 U.S. Code § 1278a.  
Test method: CPSC-CH-E 1003-09.1  
Determined by: Inductively Coupled Argon Plasma Atomic Emission Spectrophotometer

Sample	Description
1	Instruction sheet(#1/#2): red/blue/green/black multicolor coating

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VIII. Phthalates content (in composite condition)  
Ref.: CPSIA Sec. 108 & 16 CFR 1307 and 15 U.S. Code § 2057c.  
Test method: CPSC-CH-C1001-09.4 by Gas Chromatography with Mass Selective Detector

Sample No.	Phthalates content, %(w/w)									
	DBP	BBP	DEHP	DINP	DHEXP	DIBP	DPENP	DCHP	DNOP	DIDP
1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
2,3,4	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
5,6,7	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
8,9	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
10,11,12	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
13,14,15	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
16,17,18	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
19,20,21	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
22,23,24	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
25,26,27	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
28,29,30	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
31,32,33	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
34,35,36	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
37,38,39	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
40,41,42	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
43,44,45	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
46,47	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
48,49,50	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Limit	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	See Note	

Remark:

- DBP =Di-n-butyl phthalate
- BBP =Benzyl-n-butyl phthalate
- DEHP = Di (2-ethylhexyl) phthalate
- DNOP = Di-n-octyl phthalate
- DINP = Diisononyl phthalate
- DIDP = Diisodecyl phthalate
- DHEXP =Di-n-hexyl phthalate
- DIBP =Diisobutyl phthalate
- DPENP =Di-n-pentyl phthalate
- DCHP =Dicyclohexyl phthalate
- %(w/w) =percentage weight per weight

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Note : The results of DNOP and DIDP are for reference only.

- Note :
- All results are in % w/w
  - % w/w denotes percentage by weight
  - < denotes less than
  - # denotes composite sample. The results for composite sample are calculated based on the component with the least weight
  - For specification with upper limit, compliance is deemed to occur if the measured result is under the limit, even extended upwards by the expanded uncertainty with 95% coverage probability.

VIII. Phthalates content

Ref.: CPSIA Sec. 108 & 16 CFR 1307 and 15 U.S. Code § 2057c.

Test method: CPSC-CH-C1001-09.4 by Gas Chromatography with Mass Selective Detector

Sample	Description
1	Instruction sheet(#A/#B): red/blue/green/black multicolor coating
2	Basic parts: red ABS
3	Basic parts: blue ABS
4	Basic parts: yellow ABS
5	Basic parts: green ABS
6	Basic parts: pink ABS
7	Basic parts: sky blue ABS
8	Basic parts: orange ABS
9	Basic parts: lime ABS
10	Basic parts: white ABS
11	Basic parts: black ABS
12	Basic parts: brown ABS
13	Basic parts: gray ABS
14	Basic parts: lavender ABS
15	Center of middle size wheel: dull white ABS
16	Basic parts: red POM
17	Basic parts: blue POM
18	Basic parts: yellow POM
19	Basic parts: green POM
20	Basic parts: pink POM
21	Basic parts: sky blue POM
22	Basic parts: orange POM
23	Basic parts: lime POM
24	Basic parts: white POM

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**VIII.** Phthalates content

Ref.: CPSIA Sec. 108 & 16 CFR 1307 and 15 U.S. Code § 2057c.

Test method: CPSC-CH-C1001-09.4 by Gas Chromatography with Mass Selective Detector

Sample	Description
25	Basic parts: black POM
26	Basic parts: brown POM
27	Basic parts: gray POM
28	Basic parts: lavender POM
29	Wheel: dull gray POM
30	Shaft/long shaft/ mini shaft: dull black POM
31	Center of mini wheel: dull white POM
32	Clear parts: transparent PMMA
33	Clear parts: transparent red PMMA
34	Clear parts: transparent blue PMMA
35	Clear parts: transparent yellow PMMA
36	Clear parts: transparent PC
37	Clear parts: transparent red PC
38	Clear parts: transparent blue PC
39	Clear parts: transparent yellow PC
40	Tire of middle size wheel/tire of mini wheel: black PE
41	Ball joint parts: black plastic
42	Cross parts: red plastic
43	Cross parts: black plastic
44	Cross parts: yellow plastic
45	Cross parts: white plastic
46	Blister case: blue plastic
47	Blister case: pink plastic
48	Large container/small container: translucent white plastic
49	Handle of large container/handle of small container: white plastic
50	Cover of large container/cover of small container: translucent blue plastic

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### Appendix for Photos of the Submitted Sample



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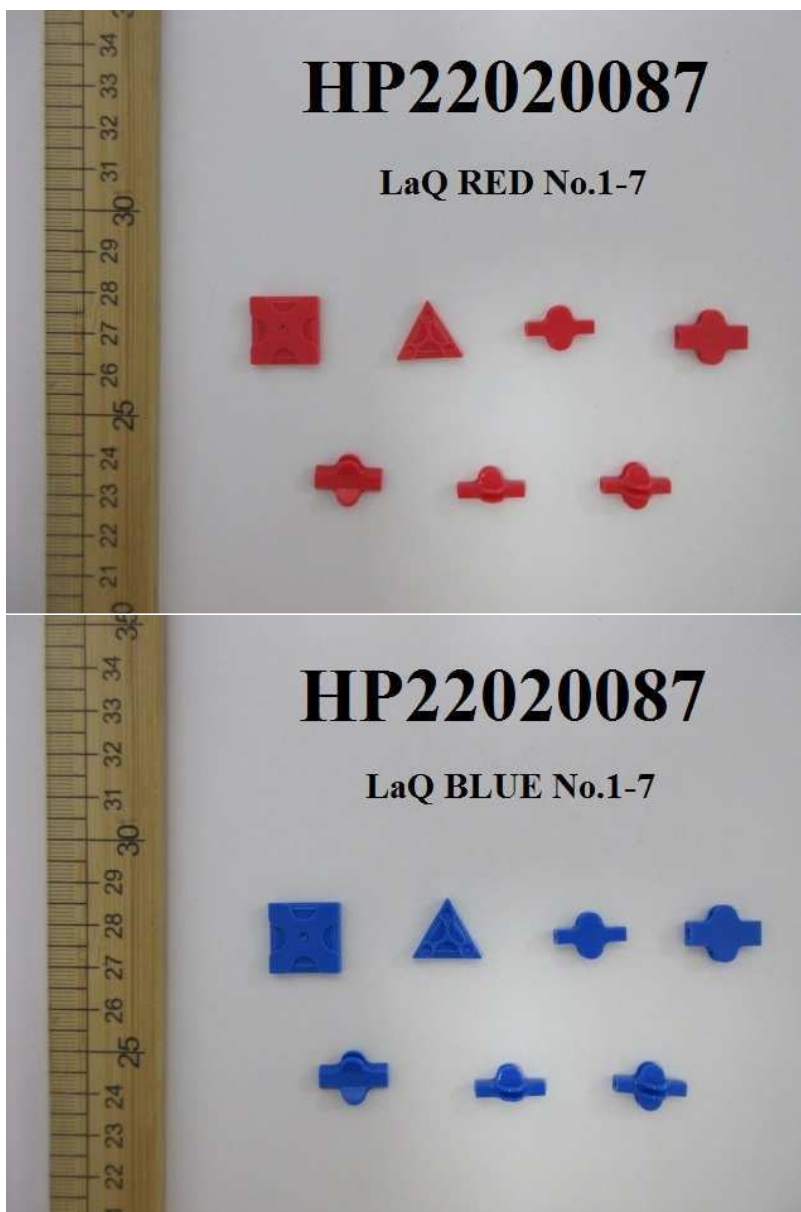
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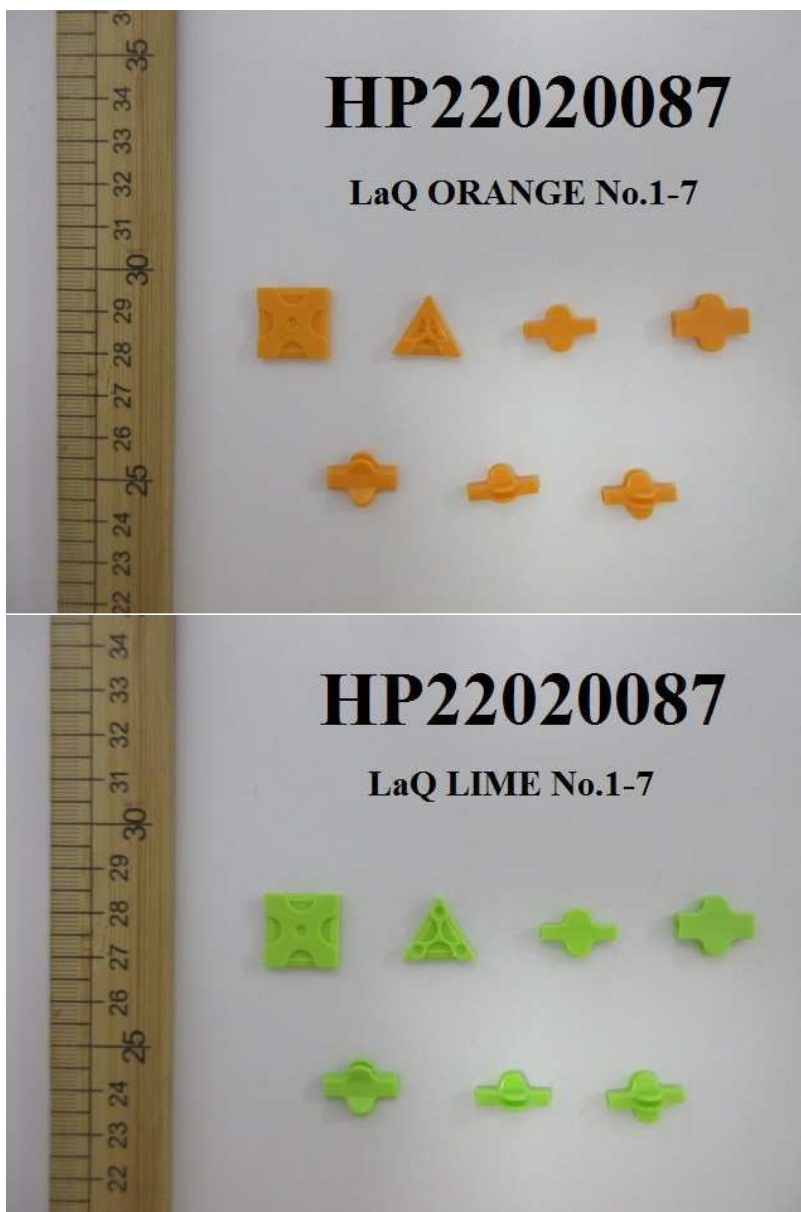
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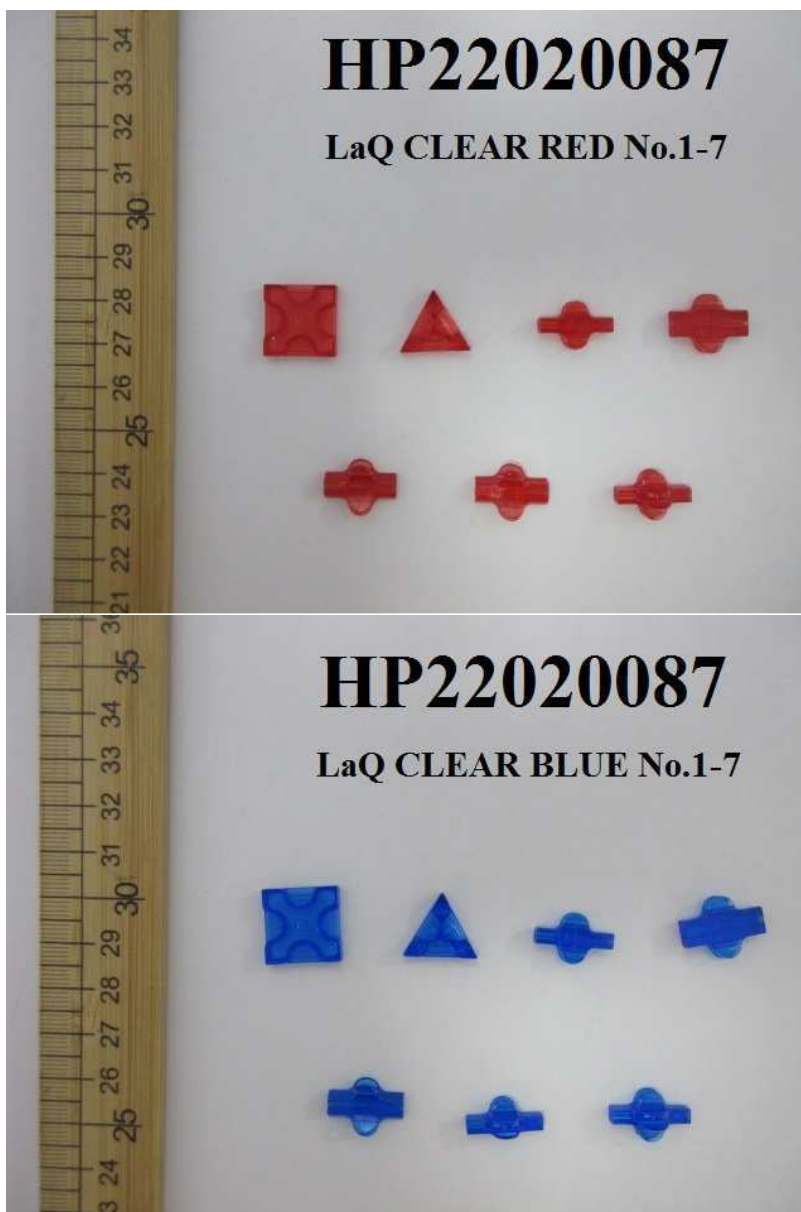
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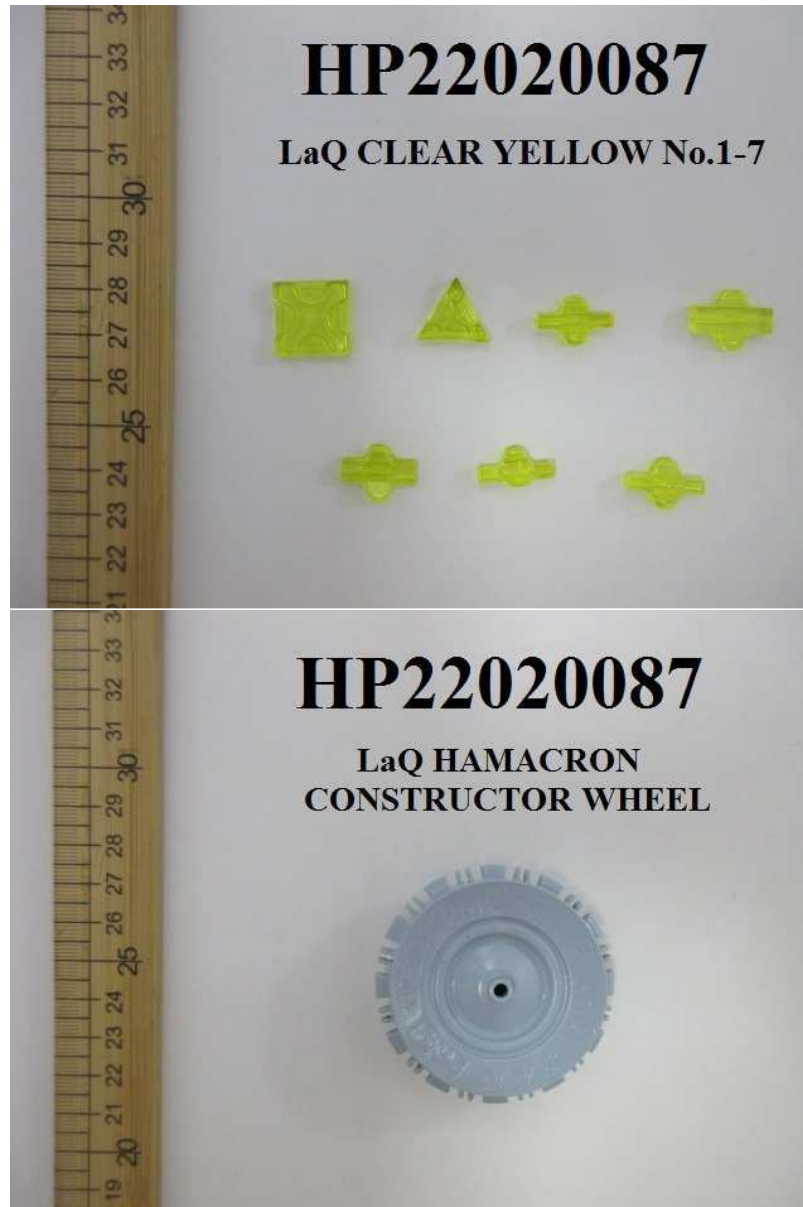
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