

**Test Report**

Number: GZHH00218100

Applicant: HANGZHOU ZHIBANG TOYS FACTORY  
NO. 22, QIAOYUAN RD, XIAOSHAN DISTRICT,  
HANGZHOU CITY, ZHEJIANG PROVINCE,  
CHINA, 311215.

Date: Sep 30, 2016

Sample Description:

Two (2) sets of submitted sample said to be :  
Item Name : **Magnetic Toys**  
Reference No. : MKS15-ZB-05  
Labelled Age Group : "Not for Kids under 3"  
Applicant Specified Age : Over 3 Years  
Grading for Testing :  
Packaging Provided by Applicant : Yes  
Vendor : Hangzhou Zhibang Toys Factory  
Country of Origin : China



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Tests conducted:

As requested by the applicant, refer to attached page(s) for details.

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To be continued

Approved :

Zhou Rui Bin  
CNAS Approved Signatory

Approved :

Joan Liu  
CNAS Approved Signatory





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Conclusion:

<u>Tested sample</u>	<u>Standard</u>	<u>Result</u>
Submitted sample sets	EN71-1:2014 for mechanical and physical properties	Pass
	EN71-2 : 2011+A1:2014 Flammability test	Pass
Tested component(s) of submitted sample sets	EN71-3:2013+A1:2014 on migration of certain elements	Pass
	Cadmium content requirement in REACH regulation Annex XVII Item 23 (EC) No 1907/2006 and amendment No. 552/2009, 494/2011, 835/2012 and 2016/217	Pass
	Phthalates content requirement in Annex XVII Items 51 & 52 of the REACH Regulation (EC) No. 1907/2006 & Amendment No. 552/2009 (formerly known as Directive 2005/84/EC)	Pass

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Tests Conducted

1 Physical and Mechanical Tests

As per European Standard on Safety of toys EN71-1:2014

Test	Clause	Parameter
Torque test	8.3	0.34 Nm
Tension test	8.4.2.1	90N
Drop test	8.5	850 mm x 5 times
Impact test	8.7	1 kg
Compression test	8.8	110 N

Clause	Testing Items	Assessment
4	General requirements	
4.1	Material	P
4.2	Assembly	NA
4.3	Flexible plastic sheeting	NA
4.4	Toy bags	NA
4.5	Glass	NA
4.6	Expanding materials	NA
4.7	Edges	P
4.8	Points and metallic wires	P
4.9	Protruding parts	NA
4.10	Parts moving against each other	NA
4.11	Mouth actuated toys and other toys intended to be put in the mouth	NA
4.12	Balloons	NA
4.13	Cords of toy kites and other flying toys	NA
4.14	Enclosures	NA
4.15	Toys intended to bear the mass of a child	NA
4.16	Heavy immobile toys	NA
4.17	Projectiles	NA
4.18	Aquatic toys and inflatable toys	NA
4.19	Percussion caps specifically designed for use in toys and toys using percussion caps	NA
4.20	Acoustics	NA
4.21	Toys containing non-electrical heat source	NA
4.22	Small balls	NA
4.23	Magnets	P
4.24	Yo-yo balls	NA
4.25	Toys attached to food	NA
5	Toys intended for children under 36 months	
5.1	General requirements	NA
5.2	Soft-filled toys and soft-filled parts of a toy	NA
5.3	Plastic sheeting	NA
5.4	Cords, chains and electrical cables in toys	NA
5.5	Liquid filled toys	NA





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Clause	Testing Items	Assessment
5.6	Speed limitation of electrically-driven ride-on toys	NA
5.7	Glass and porcelain	NA
5.8	Shape and size of certain toys	NA
5.9	Toys comprising monofilament fibres	NA
5.10	Small balls	NA
5.11	Play figures	NA
5.12	Hemispheric-shaped toys	NA
5.13	Suction cups	NA
5.14	Straps intended to be worn fully or partially around the neck	NA
6	Packaging	P
7	Warnings, markings and instructions for use	
7.1	General	P
7.2	Toys not intended for children under 36 months	NA
7.3	Latex balloons	NA
7.4	Aquatic toys	NA
7.5	Functional toys	NA
7.6	Hazardous sharp functional edges and points	NA
7.7	Projectiles	NA
7.8	Imitation protective masks and helmets	NA
7.9	Toy kites	NA
7.10	Roller skates, inlineskates and skateboards	NA
7.11	Toys intended to be attached to strung across a cradle, cot, or perambulator	NA
7.12	Liquid-filled teethers	NA
7.13	Percussion caps specifically designed for use in toys	NA
7.14	Acoustics	NA
7.15	Toy bicycles	NA
7.16	Toys intended to bear the mass of a child	NA
7.17	Toys comprising monofilament fibres	NA
7.18	Toy scooters	NA
7.19	Rocking horses and similar toys	NA
7.20	Magnetic/electrical experimental sets	NA
7.21	Toys with electrical cables exceeding 300 mm in length	NA
7.22	Toys with cords or chains intended for children of 18 months and over but under 36 months	NA

Remark: P = Pass NA = Not Applicable

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Remark: Additional information according to the Toy Safety Directives 2009/48/EC requirement. These information also appears as a note within the EN71 but are not standard requirements:

1. Marking

The manufacturer's and importer's name, registered trade name or registered trade mark, the address and the CE-marking shall be indicated on the toy or, where that is not possible, on its packaging or in a document accompany the toy. In addition, manufacturers shall ensure that their toys bear a type, batch, serial or model number or other element allowing their identification, or where the size or nature of the toy does not allow it, that the required information is provided on the packaging or in a document accompanying the toy.

- Manufacturer's name was on the packaging.
- Manufacturer's address was on the packaging.
- Importer's name was missed.
- Importer's address was missed.
- Product identification code was on the packaging.
- CE marking was on the packaging.

Date sample received : Sep 26, 2016  
Testing period : Sep 26, 2016 to Sep 28, 2016

2 Flammability Test

As per European Standard on Safety of Toys EN71-2:2011+A1:2014

Clause	Testing Items	Assessment
4.1	General	P
4.2	Toys to be worn on the head	NA
4.3	Toy disguise costumes and toys intended to be worn by a child in play	NA
4.4	Toys intended to be entered by a child	NA
4.5	Soft filled toys	NA

Remark: P = Pass NA = Not Applicable

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3 19 Toxic Element Migration Test

(A) Test Result

As per EN71-3:2013+A1:2014 and followed by Inductively Coupled Plasma Atomic Emission Spectrometry, Inductively Coupled Argon Mass Spectrometry.

Category (III): Scraped-off toy material

Element	Result (mg/kg)		Reporting Limit (mg/kg)	Limit (mg/kg)
	Tested Component			
	(1), (2)			
Aluminium (Al)	ND		300	70000
Antimony (Sb)	ND		10	560
Arsenic (As)	ND		10	47
Barium (Ba)	ND		10	18750
Boron (B)	ND		50	15000
Cadmium (Cd)	ND		5	17
Chromium (III) (Cr III) **	ND		10	460
Chromium (VI) (Cr VI) **	ND		0.1	0.2
Cobalt (Co)	ND		10	130
Copper (Cu)	ND		10	7700
Lead (Pb)	ND		10	160
Manganese (Mn)	ND		10	15000
Mercury (Hg)	ND		10	94
Nickel (Ni)	ND		10	930
Selenium (Se)	ND		10	460
Strontium (Sr)	ND		100	56000
Tin (Sn)	ND		10	180000
Organic tin **	ND		2.0	12
Zinc (Zn)	ND		100	46000

Remark : mg/kg = milligram per kilogram

ND = Not detected

++ = Unless the test results were marked with "#" or "Δ", Chromium (III) & Chromium (VI) and Organic tin contents were not directly determined and were derived from migration results of total chromium and tin respectively.

- Organic tin test result was expressed as tributyl tin.

Tested Component(s): See component list in the last section of this report

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(B) Categories of various toy materials

Category I: Dry, brittle, powder like or pliable

Solid toy material from which powder-like material is released during playing and semi-solid materials that may also leave residues on the hands during play. The material can be ingested. Contamination of the hands with the material may contribute to the oral exposure of the material. (e.g. the cores of colouring pencils, chalk, crayons, modelling clays and plaster).

Category II: Liquid or sticky

Fluid or viscous toy material, which can be ingested or to which dermal exposure may occur during playing. (e.g. liquid paints, finger paints, liquid ink in pens, glue sticks, slimes, bubble solution).

Category III : Scraped-off

Solid toy material with or without a coating, which can be ingested as a result of biting, tooth scraping, sucking or licking. (e.g. coatings, lacquers, plastics, paper, textiles, glass, ceramic, metallic, wooden, bone, leather and other materials).

Date sample received: Sep 26, 2016  
Testing period: Sep 26, 2016 to Sep 29, 2016

4 Cadmium (Cd) Content

With reference to test methods EN1122: 2001 and IEC 62321-5:2013, acid digestion method was used and total Cadmium content was determined by Inductively Coupled Argon Plasma Spectrometry.

Element	Result (%)	Reporting Limit (%)
	Tested Component	
	(1+2), (4+5+6), (7)	
Cadmium (Cd)	ND	0.0005

Limit:

Category	Limit (%)
Wet paint	0.01
Surface coating	0.1
Plastic	0.01
Metal parts of jewelry & hair accessories	0.01

ND = Not detected

Tested Component(s): See component list in the last section of this report

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5 Phthalate Content

With reference to EN 14372:2004, by Gas Chromatographic-Mass Spectrometric (GC-MS) analysis.

For 3 phthalate

Test Item	Result (%)		Reporting Limit (%)	Limit (%)
	Tested component			
	(3)			
Dibutyl phthalate (DBP)	ND		0.01	--
Di-(2-ethyl hexyl) phthalate (DEHP)	ND		0.01	--
Benzyl butyl phthalate (BBP)	ND		0.01	---
Sum of DBP,DEHP and BBP	ND		--	0.1

For 6 phthalate

Test Item	Result (%)		Reporting Limit (%)	Limit (%)
	Tested component			
	(1+2)			
Dibutyl phthalate (DBP)	ND		0.01	--
Di-(2-ethyl hexyl) phthalate (DEHP)	ND		0.01	--
Benzyl butyl phthalate (BBP)	ND		0.01	---
Sum of DBP,DEHP and BBP	ND		--	0.1
Di-iso-nonyl phthalate (DINP)	ND		0.01	--
Di-n-octyl phthalate(DNOP)	ND		0.01	--
Di-iso-decyl phthalate (DIDP)	ND		0.01	--
Sum of DINP, DNOP and DIDP	ND		--	0.1

The above limit was quoted according to Annex XVII Items 51 & 52 of the REACH Regulation (EC) No. 1907/2006 & Amendment No. 552/2009(formerly known as Directive 2005/84/EC) for phthalate content in toys and child care articles.

ND = Not detected

Tested Component(s): See component list in the last section of this report

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Component list:

- (1) Semi-transparent yellow plastic (triangle frame, hexagon frame, square frame).
- (2) Semi-transparent fuchsia plastic (triangle frame, hexagon frame, square frame).
- (3) White paper (lining of triangle frame, hexagon frame, square frame)(internal).
- (4) Blue plastic (cover of box)(packaging).
- (5) Cream plastic (buckle of cover of box)(packaging).
- (6) Transparent plastic (body of box)(packaging).
- (7) Multicolor coatings on paper (sticker of box)(packaging).

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End of report

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