

Test Report

Number: GZHH00329957

Applicant: RASTAR GROUP
XINGHUI INDUSTRIAL PARK,
XIADAO ROAD, SHANGHUA, CHENGHAI,
SHANTOU, GUANGDONG, CHINA

Date: Jun 24, 2019

Sample Description:

Five (5) sets of tested sample said to be :
Item Name : Model R/C Car
Labelled Age Group : 6+
Applicant Specified Age : Over 6 years
Grading for Testing :
Packaging Provided by : Yes
Applicant :
Country of Origin : China



To be continued

Authorized by:
For Intertek Testing Services Shenzhen Ltd.
Guangzhou Branch, Hardlines

Ben N.L. Lin
General Manager



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Intertek Testing Services Shenzhen Limited,
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Tests conducted:

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

Conclusion:

Tested sample	Standard	Result
Submitted sample sets	EN71-1:2014+A1:2018 for mechanical and physical properties	Pass
	EN71-2:2011+A1:2014 Flammability test	Pass
Tested component(s) of submitted sample sets	EN71-3:2013+A3:2018 on migration of certain elements	Pass
	EN71-3:2013+A3:2018 on migration of certain elements & EU 2018/725 amending 2009/48/EC (effective from Nov 18,2019) for chromium (VI) migration	Pass

Remark: No samples are submitted for testing. All test results stated in the test reported was referred to our test report No. GZHH00316476 date on Apr 04, 2019.

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General Manager



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Tests Conducted

1 Physical and Mechanical Tests

As per European Standard on Safety of toys EN71-1:2014+A1:2018

The submitted samples were undergone the following abuse tests:

Test	Clause	Parameter
Drop test	8.5	850 mm x 5 times
Impact test	8.7	1 kg
Flexibility of metallic wires	8.13	70 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	P
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	Projectile toys	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	NA
4.24	Yo-yo balls	NA
4.25	Toys attached to food	NA
4.26	Toy disguise costumes	NA
4.27	Flying toys	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



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Clause	Testing Items	Assessment
5.5	Liquid filled toys	NA
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
5.15	Sledges with cords for pulling	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	Projectile toys	NA
7.8	Imitation protective masks and helmets	NA
7.9	Toy kites	NA
7.10	Roller skates, inlineskates and skateboards and certain other ride-on toys	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
7.23	Toys intended to be attached to a cradle, cot or perambulator	NA
7.24	Sledges with cords for pulling	NA
7.25	Flying toys	NA
7.26	Improvised projectiles	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 and toy.
- 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 and toy.

Date sample received : Mar 20, 2019

Testing period : Mar 20, 2019 to Mar 25, 2019

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

Date sample received : Mar 20, 2019

Testing period : Mar 20, 2019 to Mar 25, 2019



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3 19 Toxic Element Migration Test

(A) Test Result

As per EN71-3:2013+A3:2018 and followed by Inductively Coupled Plasma Atomic Emission Spectrometry, Gas Chromatographic - Mass Spectrometry.

Category (III): Scraped-off toy material

Element	Result (mg/kg)				Reporting Limit (mg/kg)	Limit (mg/kg)
	Tested Component					
	(7)	(8)	(20)	(21)		
Aluminium (Al)	1328	ND	10302	407	300	70000
Antimony (Sb)	ND	ND	ND	ND	10	560
Arsenic (As)	ND	ND	ND	ND	10	47
Barium (Ba)	ND	ND	ND	ND	10	18750
Boron (B)	ND	ND	ND	ND	50	15000
Cadmium (Cd)	ND	ND	ND	ND	5	17
Chromium (III) (Cr III) **	ND	ND	ND	ND	10	460
Chromium (VI) (Cr VI) **	ND	ND	ND	ND	0.025	0.2/0.053◎
Cobalt (Co)	ND	ND	ND	ND	10	130
Copper (Cu)	ND	18	ND	ND	10	7700
Lead (Pb)	ND	ND	ND	ND	10	23
Manganese (Mn)	ND	ND	ND	ND	10	15000
Mercury (Hg)	ND	ND	ND	ND	10	94
Nickel (Ni)	ND	ND	ND	ND	10	930
Selenium (Se)	ND	ND	ND	ND	10	460
Strontium (Sr)	ND	ND	ND	ND	100	56000
Tin (Sn)	ND	24	ND	ND	2.5	180000
Organic tin **	ND	ND ^A	ND	ND	2.0	12
Zinc (Zn)	ND	ND	ND	ND	100	46000



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Element	Result (mg/kg)			Reporting Limit (mg/kg)	Limit (mg/kg)
	Tested Component				
	(25)	(26)	(27)		
Aluminium (Al)	19335	1063	611	300	70000
Antimony (Sb)	ND	ND	ND	10	560
Arsenic (As)	ND	ND	ND	10	47
Barium (Ba)	ND	ND	ND	10	18750
Boron (B)	ND	ND	ND	50	15000
Cadmium (Cd)	ND	ND	ND	5	17
Chromium (III) (Cr III) **	ND	ND	ND	10	460
Chromium (VI) (Cr VI) **	ND	ND	ND	0.025	0.2/0.053◎
Cobalt (Co)	ND	ND	ND	10	130
Copper (Cu)	ND	ND	ND	10	7700
Lead (Pb)	ND	ND	ND	10	23
Manganese (Mn)	ND	ND	ND	10	15000
Mercury (Hg)	ND	ND	ND	10	94
Nickel (Ni)	ND	ND	ND	10	930
Selenium (Se)	ND	ND	ND	10	460
Strontium (Sr)	ND	ND	ND	100	56000
Tin (Sn)	ND	ND	ND	2.5	180000
Organic tin **	ND	ND	ND	2.0	12
Zinc (Zn)	ND	ND	ND	100	46000

Element	Result (mg/kg)	Reporting Limit (mg/kg)	Limit (mg/kg)
	Tested Component		
	(1)to(4), (6), (9)to(19), (22)to(24), (28)to(30)		
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	0.025	0.2/0.053◎
Cobalt (Co)	ND	10	130
Copper (Cu)	ND	10	7700
Lead (Pb)	ND	10	23
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	2.5	180000
Organic tin **	ND	2.0	12
Zinc (Zn)	ND	100	46000



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Remark : mg/kg = milligram per kilogram
++ = 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.
ND = Not detected (less than reporting limit)
⊙ = The new chromium (VI) migration limit [(0.053mg/kg for Category (III))] were quoted from directive (EU) 2018/725 amending 2009/48/EC effective from 18 November 2019.
Δ = Confirmation test was performed on the tested component. The reported value was the sum of the migration values of Methyl tin, Butyl tin, Dibutyl tin, Tributyl tin, Tetra-butyl tin, n-Octyl tin, Di-n-octyl tin, Di-n-propyl tin, Diphenyl tin and Triphenyl tin after converted to Tributyl tin by calculation. Other Organic tin compounds may be also be present in sample as stated in EN71-3:2013+A3:2018.

Tested Component(s):

- (1) Black plastic (body of black remote control, button of red remote control).
- (2) Transparent red plastic (LED of black remote control)(sample weight: 40.1mg).
- (3) Red plastic (button of black remote control).
- (4) Dull red plastic (body of red remote control).
- (5) @Coatings (black, yellow) (sticker of red remote control).
- (6) Bright silver color coating on plastic (top bar, exhaust pipe of black car, yellow car, white car, fence of silver-grey car)(sample weight: 12.1mg).
- (7) Coatings (black, silver color, gold color, red) on plastic (shell, wheel, window, mirror, logo, seat of black car, yellow car, white car, wheel of red car, button of black remote control).
- (8) Coatings (transparent red, silver color) on plastic (light of black car, yellow car, white car)(sample weight: 20.0mg).
- (9) White plastic excluding coatings (shell of black car, yellow car, white car).
- (10) Transparent plastic (window, light of black car, yellow car, white car, silver-grey car).
- (11) Black soft plastic (tire of black car, yellow car, white car, silver-grey car).
- (12) White plastic excluding coating (mirror of black car, silver-grey car, yellow car, white car).
- (13) Off-white plastic excluding coating (top bar, exhaust pipe of black car, yellow car, white car).
- (14) Light grey plastic (direction adjuster of black car, silver-grey car, yellow car, white car).
- (15) Bright black plastic (switch of black car, red car, yellow car, white car).
- (16) Coatings (white, green, red, yellow, black) on plastic (logo, shell of red car)(sample weight: 15.1mg).
- (17) Red plastic (shell of red car).
- (18) Black soft plastic (mirror, tail of red car).
- (19) White plastic (direction adjuster of black car).
- (20) Coatings (silver-grey, yellow, white, black, blue, silver color, red) on plastic (shell, logo, mirror, black of silver-grey car).
- (21) White paper label with transparent plastic film and inaccessible coatings (sticker of silver-grey car).
- (22) Red coating on soft plastic (loop of silver-grey car)(sample weight: 21.0mg).
- (23) Black soft plastic excluding coating (loop of silver-grey car).
- (24) Dull grey plastic excluding coatings (shell, mirror of silver-grey car).
- (25) Coatings (silver color, yellow, black) on plastic (wheel of silver-grey car)(sample weight: 58.1mg).
- (26) Coatings (yellow, black, gold color, red, silver color) on plastic (shell of yellow car).
- (27) Coatings (white, black, gold color, red, silver color) on plastic (shell of white car).
- (28) Black plastic (wheel, chassis of black car, red car, silver-grey car, yellow car, white car).
- (29) Black plastic (tire of red car).
- (30) Black soft plastic (mirror of black car, yellow car, white car).



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@: Since the sample weight of the component was less than 10 mg, soluble heavy metal analysis was not applicable.

(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: Mar 20, 2019

Testing period: Mar 20, 2019 to Apr 03, 2019



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Appendix

Reference No.	:	50100(2.4GHz	A),21000(2.4GHz	A),21800(2.4GHz	A),21900(2.4GHz
		A),26400(2.4GHz	A),27400(2.4GHz	A),28200(2.4GHz	A),30400(2.4GHz
		A),30600(2.4GHz	A),31400(2.4GHz	A),31600(2.4GHz	A),31900(2.4GHz
		A),38110(2.4GHz	A),38500(2.4GHz	A),38900(2.4GHz	A),38901(2.4GHz
		A),40300(2.4GHz	A),40700(2.4GHz	A),42100(2.4GHz	A),42300(2.4GHz
		A),42400(2.4GHz	A),42600(2.4GHz	A),42800(2.4GHz	A),42900(2.4GHz
		A),43000(2.4GHz	A),44600(2.4GHz	A),47100(2.4GHz	A),47200(2.4GHz
		A),47300(2.4GHz	A),47400(2.4GHz	A),47500(2.4GHz	A),47510(2.4GHz
		A),47600(2.4GHz	A),47700(2.4GHz	A),47900(2.4GHz	A),48000(2.4GHz
		A),49100(2.4GHz	A),49200(2.4GHz	A),49300(2.4GHz	A),49400(2.4GHz
		A),49600(2.4GHz	A),49700(2.4GHz	A),49800(2.4GHz	A),49900(2.4GHz
		A),57400(2.4GHz	A),57500(2.4GHz	A),70300(2.4GHz	A),70400(2.4GHz
		A),70500(2.4GHz	A),70600(2.4GHz	A),70700(2.4GHz	A),70710(2.4GHz
		A),70800(2.4GHz	A),70900(2.4GHz	A),71000(2.4GHz	A),71010(2.4GHz
		A),71100(2.4GHz	A),72500(2.4GHz	A),73000(2.4GHz	A),73300(2.4GHz
		A),73400(2.4GHz	A),73700(2.4GHz	A),74000(2.4GHz	A),74010(2.4GHz
		A),74100(2.4GHz	A),74400(2.4GHz	A),74500(2.4GHz	A),75000(2.4GHz
		A),75100(2.4GHz	A),75110(2.4GHz	A),75300(2.4GHz	A),75400(2.4GHz
		A),75500(2.4GHz	A),75600(2.4GHz	A),75700(2.4GHz	A),75800(2.4GHz
		A),75900(2.4GHz	A),78000(2.4GHz	A),78100(2.4GHz	A),78400(2.4GHz
		A),78700(2.4GHz	A),78410(2.4GHz	A),50160(2.4GHz	A),70460(2.4GHz
		A),70770(2.4GHz	A),70860(2.4GHz	A),71060(2.4GHz	A),71070(2.4GHz
		A),72560(2.4GHz	A),74160(2.4GHz	A),74560(2.4GHz	A),75360(2.4GHz
		A),57500-5(2.4GHz	A),23200-1(2.4GHz	A),49600-11(2.4GHz	A)

End of report

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