

## Test Report

Number: GZHH00342149

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

Date: Oct 25, 2019

### Sample Description:

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



### Tests conducted:

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

To be continued



## Test Report

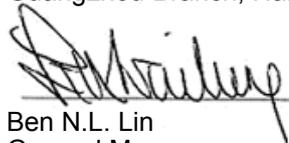
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Conclusion:

<u>Tested sample</u>	<u>Standard</u>	<u>Result</u>
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
	EN71-3:2019 on migration of certain elements	Pass

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



Ben N.L. Lin  
General Manager



## Test Report

Number: GZHH00342149

### 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	NA
7	Warnings, markings and instructions for use	
7.1	General	P
7.2	Toys not intended for children under 36 months	P/#
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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## Test Report

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### Tests Conducted

# = Age warning statement, graphical symbol and the indication of hazard was found on the packaging.

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 and toy.
- CE marking was on the packaging and toy.

Date sample received : Oct 16,2019  
Testing period : Oct 16,2019 to Oct 18, 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 : Oct 16,2019  
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**Test Report**

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Tests Conducted

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, Ion Chromatography with UV-VIS.

Category (III): Scraped-off toy material

Element	Result (mg/kg)				Reporting Limit (mg/kg)	Limit (mg/kg)
	Tested Component					
	(2)	(3)	(14)	(26)		
Aluminium (Al)	16621	579	ND	ND	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	ND	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	ND	ND	ND	2.5	180000
Organic tin **	ND	ND	ND	ND	2.0	12
Zinc (Zn)	ND	ND	557	1780	100	46000

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### Tests Conducted

Element	Result (mg/kg)	Reporting Limit (mg/kg)	Limit (mg/kg)
	Tested Component		
	(4), (18), (24), (25), (28)		
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
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Zinc (Zn)	ND	100	46000

Element	Result (mg/kg)	Reporting Limit (mg/kg)	Limit (mg/kg)
	Tested Component		
	(15), (16), (17), (19), (20), (21), (22), (23), (27)		
Aluminium (Al)	ND	300	70000
Antimony (Sb)	ND	10	560
Arsenic (As)	ND	10	47
Barium (Ba)	ND	10	18750
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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. Client requirement on Aluminium (Al) for category(III) = 28130 mg/kg  
# = Confirmation of Chromium (VI) test was performed on the tested component. And the reported value of migration of Chromium (III) = migration value of total Chromium – migration value of Chromium(VI).

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

### (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: Oct 16, 2019

Testing period: Oct 16, 2019 to Oct 24, 2019

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**Test Report**

Number: GZHH00342149

Tests Conducted

4 19 Toxic Element Migration Test

(A) Test Result

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Date sample received: Oct 16, 2019

Testing period: Oct 16, 2019 to Oct 24, 2019

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Tests Conducted

Component list:

- (1) @Coatings (blue, silver color) on plastic (logo of car of sample #1, #2, #3).
- (2) Silver color coating on plastic (side, entrance mat, steering wheel, spare wheel, wheel, tail of car of sample #1, #2, #3, #4, #5, pattern of remote control of sample #1, #2, #3) (sample weight: 50.1mg).
- (3) Bright silver color coating on plastic (head logo, exhaust pipe, outside mirror of car of sample #1, #2, #3) (sample weight: 32.5mg).
- (4) Black coating on plastic (edge of roof of car sample #1, #3) (sample weight: 62.5mg).
- (5) @White coating on plastic (pattern of remote control of all styles).
- (6) @Red coating on plastic (pattern of trunk door, rear of car of sample #1, #2).
- (7) @Orange coating on plastic pattern of trunk door of car of sample #3).
- (8) @Coatings (red, black) on plastic (pattern of tail of car sample #4, #5).
- (9) @Coatings (red, white, green) on plastic (pattern of car of sample #4, #5).
- (10) @Coatings (silver color, red, black) on plastic (pattern of body side molding of car of sample #4, #5).
- (11) @Coatings (gold color, black) on plastic (head logo of car of sample #4, #5).
- (12) @Coatings (white, black, red) on plastic (rear logo of car of sample #4, #5).
- (13) @Gold color coating on plastic (logo of remote control of sample #4, #5).
- (14) White plastic (body of car sample #1).
- (15) Black plastic (edge of windshield wiper, windshield, sliding sunroof, window, safe seats, car door, spare wheel, trunk, head of car of sample #1, #2, #3, chassis, wheel, battery covering, switch of car of all styles, body, battery covering of remote control of sample #1, #2, #3).
- (16) Black plastic (body of car of sample #2).
- (17) Bright black plastic (windshield wiper, windshield, rear of car of sample #4, #5, body of remote control of sample #4, #5).
- (18) Black soft plastic (outside mirror of car of all styles, antenna of remote control of sample #1, #2, #3).
- (19) Black soft plastic (tire of car of all styles).
- (20) Off white plastic (direction adjustment of car of sample #1, #2, #3).
- (21) Transparent white plastic (direction adjustment of car of sample #4, #5).
- (22) Transparent plastic (headlight, bonnet, windshield, window, sliding sunroof, rear window of car of sample #1, #2, #3).
- (23) Transparent red plastic (tail lamp of car of sample #1, #2, #3).
- (24) Red plastic (body of car of sample #3).
- (25) Light red plastic (outside mirror, exhaust pipe of car of sample #1, #2, #3).
- (26) Bright red plastic (button of remote control of sample #1, #2, #3).
- (27) Orange plastic (body of car sample #4).
- (28) Yellow plastic (body of car sample #5).

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

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## Test Report

Number: GZHH00342149

### Tests Conducted

### Appendix

Reference No./Description	:	73300	Porsche Macan
		73400	Ferrari 458 Speciale A
		73700	Volvo XC90
		74000	Mercedes AMG GT
		74010	Mercedes AMG GT
		74100	Mercedes AMG GT3 Performance
		74160	Mercedes AMG GT3 Performance
		74400	AUDI R8 2015 Version
		74500	Ferrari 458 Speciale A Convertible Version
		74560	Ferrari 458 Speciale A Convertible Version
		75000	McLaren P1 GTR
		75100	McLaren P1
		75110	McLaren P1
		75300	AUDI R8 LMS Performance 2015 Version
		75360	AUDI R8 LMS Performance 2015 Version
		75400	Pagani Huayra BC
		75500	Maserati Levante
		75600	Ferrari 488 GTB
		75700	Bugatti Veyron Chiron
		75800	Ferrari LaFerrari Aperta
		75900	Porsche 911 GT3 CUP
		78000	Volkswagen Beetles
		78100	Ford GT
		78400	Land Rover Defender
		78400-1	Land Rover Defender
		78700	Ferrari F40
		78410	Land Rover Defender
		57500-5	Lamborghini Aventador J
		74720	RS Transformable car
		74700	RS Transformable car
		74600	Pagani Transformable car
		74620	Pagani Transformable car
		74800	Mercedes-Benz GT3 Transformable car
		74820	Mercedes-Benz GT3 Transformable car
		76420	Land Rover Defender Transformable Car
		76400	Land Rover Defender Transformable Car
		78900	Mercedes-Benz Arocs Transport Mixer
		79000	Mercedes-Benz Arocs Logging vehicle
		96600	McLaren Senna
		96700	McLaren Senna
		97100	BMW M8 GTE

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Tests Conducted

Appendix

Reference No./Description	:	52600	Lamborghini Aventador LP700-4
		77620	RS Wolf Warriors
		77640	RS Wolf Warriors
		77720	Mercedes-Benz Container Truck
		77960	RS Intelligent DOGO
		77900	RS Intelligent DOGO
		76900	RS Robot - Spaceman
		76960	RS Robot - Spaceman
		76910	RS Robot - Spaceman
		77100	MINI RS Robot - Spaceman
		79700	RS Intelligent dinosaur
		77700	Mercedes-Benz Container Truck
		77720	Mercedes-Benz Container Truck
		49600-14	BMW I8 Racing Set
		77700-14	Mercedes-Benz Container Truck with Helicopter
		77760-14	Mercedes-Benz Container Truck with Helicopter
		42800-8	Porsche GT3 RS
		43000-8	Lamborghini Aventador LP700
		47300-8	Ferrari 458 Italia
		47510-8	Audi R8 LMS
		47600-8	Mercedes SLS
		47900-8	Range Rover Evoque
		48000-8	BMW M3
		49600-8	BMW I8
		50100-8	Ferrari LaFerrari
		53400-8	Ferrari 458 Italia
		53610-8	Audi R8 LMS
		53400-10	Ferrari 458 Italia
		53500-10	Ferrari F12
		53600-10	Audi R8
		53610-10	Audi R8 LMS
		53700-10	Lamborghini Sesto Elemento
		54100-10	Mercedes SLS AMG

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End of report

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