

**Test Report**

Number: GZHH00336639

Applicant: DONGHUANG TOYS FACTORY  
CHENGHAI DISTRICT SHANTOU CITY  
GUANGDONG PROVINCE CHINA

Date: Sep 24, 2019

Sample Description:

Five (5) sets of submitted sample said to be :

Item Name : **Remote-Control Planes,RC Drone**  
Item No. : DH8001D-1、DH8002D、DH8003D、DH881、DH8001A、DH866D、  
DH859D、DH875、DH807、DH808、DH815、DH831、DH832、DH833、  
DH835、DH836、DH837、DH838、DH855、DH856、DH857、DH858、  
DH859、DH860、DH861、DH862、DH802、DH865、DH866、DH867、  
DH868、DH869、DH870、DH871、DH872、DH873、DH880、DH888、  
DH999、DH866D-1、DH666、DH8009、DH8008、DH8007、DH8006、  
DH8005、DH8010、DH8011、DH8012、DH8013、LC222、LC888、LC999、  
DH876A、DH859D-1、DH886、DH866C-1、DH866-3、DH830A、DH808-1、  
DH829、DH888-A1、DH888-B1、DH888-C1、DH888-D1、DH888-E1、  
DH888-F1、DH888-G1、DH888-H1、DH880A、DH880B、DH880D、  
DH803-1、DH866B-1、DH805、DH876、DH839、DH818、DH806、DH828  
Above sample information is submitted and/or identified by client

Labelled Age Group : "8+"  
Applicant Specified Age : Over 8 years  
Grading for Testing :  
Packaging Provided by Applicant : Yes  
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



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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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Approved:




Albert Chen  
Toys Lab Assistant Manager

Approved:



Bella Hu  
Sr.Engineer



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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
Torque test	8.3	0.34 Nm
Tension test	8.4.2.1	90N
Protective components	8.4.2.3	60 N
Drop test	8.5	850 mm x 5 times
Impact test	8.7	1 kg

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	P
4.10	Parts moving against each other	P/#1
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	P
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	P/#1
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



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Clause	Testing Items	Assessment
5.3	Plastic sheeting	NA
5.4	Cords, chains and electrical cables in toys	NA
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	P/#2
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 teethingers	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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#1 = According to the document NB-TOYS/2016/013 Rev 5 dated 18 Feb 2016, EN71 does not cover specific risks related to remote controlled toy helicopters Item No. DH8001A and shall subject to EC-type examination which conducted by notified body in Europe to show the product compliance to 2009/48/EC toy directive.

#2 = 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 missed.
- Manufacturer's address was missed.
- Importer's name was missed.
- Importer's address was missed.
- Product identification code was missed.
- CE marking was on the packaging and toy.

Date sample received :Aug 22, 2019  
Testing period :Aug 22, 2019 to Sep 23, 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 :Aug 22, 2019  
Testing period :Aug 22, 2019 to Sep 23, 2019

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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				
	(1)	(6)	(7)		
Aluminium (Al)	ND	5233	8321	300	70000
Antimony (Sb)	ND	ND	ND	10	560
Arsenic (As)	ND	ND	ND	10	47
Barium (Ba)	ND	ND	12	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 <sup>#</sup>	ND <sup>#</sup>	ND <sup>#</sup>	0.025	0.2/0.053 <sup>◎</sup>
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

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Tests Conducted

Element	Result (mg/kg)		Reporting Limit (mg/kg)	Limit (mg/kg)
	Tested Component			
	(2)to(5), (7)to(16), (18)			
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

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.

# = 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

Remark: As requested by the applicant, toxic elements content test were conducted only components listed in this report. Other components were not tested.

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Tests Conducted

(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: Aug 20, 2019

Testing period: Aug 20, 2019 to Aug 27, 2019

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Number: GZHH00336639

Tests Conducted

4 19 Toxic Element Migration Test

(A) Test Result

As per EN71-3:2019 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				
	(1)	(6)	(7)		
Aluminium (Al)	ND	5233	8321	300	70000
Antimony (Sb)	ND	ND	ND	10	560
Arsenic (As)	ND	ND	ND	10	47
Barium (Ba)	ND	ND	12	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 <sup>#</sup>	ND <sup>#</sup>	ND <sup>#</sup>	0.025	0.053 <sup>◎</sup>
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

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Element	Result (mg/kg)		Reporting Limit (mg/kg)	Limit (mg/kg)
	Tested Component			
	(2)to(5), (7)to(16), (18)			
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Zinc (Zn)	ND		100	46000

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 - Organic tin test result was expressed as tributyl tin.  
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 # = 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

Remark: As requested by the applicant, toxic elements content test were conducted only components listed in this report. Other components were not tested.

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(B) Categories of various toy materials

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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: Aug 20, 2019

Testing period: Aug 20, 2019 to Aug 27, 2019

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Component list:

- (1) Orange plastic (two-blade propeller of orange drones).
- (2) Black plastic (body of orange drones).
- (3) Light yellow plastic (strut of light yellow drones).
- (4) Red plastic (button of red remote control).
- (5) Dark blue plastic (two-blade propeller of white drones).
- (6) Bright blue coatings on plastic (cover of black drones)(sample weight : 37.5mg).
- (7) Bright grey EVA foam (parts).
- (8) Transparent PVC plastic (parts).
- (9) Cyan plastic (two-blade propeller of cyan drones).
- (10) Cyan plastic (cover of cyan drones).
- (11) Red plastic (cover of red drones).
- (12) Yellow plastic (cover of yellow drones).
- (13) White PVC plastic (head of red plan).
- (14) Black plastic (cover of blue remote control).
- (15) White plastic (two-blade propeller of blue ball).
- (16) Coatings (blue, light blue, white) on plastic (body of blue ball).
- (17) Silver color coating on plastic (cover of blue remote control)(sample weight : 47.8mg).
- (18) Transparent plastic (body of transparent ball).

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End of report

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