

**Test Report**

Number: GZHH00311495

Applicant: MAY CHEONG TOY PRODUCTS FTY., LTD  
UNIT 901-2, 9/F., EAST OCEAN CENTRE,  
98 GRANVILLE ROAD, TSIMSHATSUI EAST,  
KOWLOON, HONG KONG

Date: Jan 25, 2019

Attn: ICY HUANG

Sample Description:

Three (3) styles of submitted sample said to be :

No.	Item	Description	Color
1	31094	Harley Davidson ~ 1:24 1967 Ford Mustang GT (w/RB rim)	Metallic Red/Metallic Grey
2	31037	1:26 1966 Lincoln Continental	Gold
3	32530	1:24 1986 Chevrolet Monte Carlo SS	Metallic Dark Red

Labelled Age Group : "8+"  
 Applicant Specified Age : Over 8 years  
 Grading for Testing :  
 Packaging Provided by Applicant : Yes  
 Country of Origin : China  
 Applicant's Ref. : 32160 1:24 H-D Ford Mustang  
 32162 1:24 H-D Ford Mustang & 1:24 H-D Ford Pick-up w/1:24 H-D motorcycle Asst  
 34041 7 pcs 1:24 HD Ford Mustang + 7 pcs 1:24 Pickup in Floor Display  
 34049 1:24 Harley Davidson Ford, Asst. 20 pcs in floor display  
 34160 1:24 Harley Davidson Ford Mustang bulk pack in tray  
 34161 1:24 HD Ford Pick-up w/o motorcycle 4 pk in open tray  
 32451 1:24 Design Classic Muscle, Assorted  
 32457 1:24 Design Classics , Assorted

Tests conducted:

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

To be continued

Approved:



Zhou Rui Bin  
Technical Manager

Approved:

Huang Hui Hua  
Technical Support Assistant Manager



**Test Report**

Number: GZHH00311495

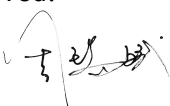
Conclusion:

<u>Tested sample</u>	<u>Standard</u>	<u>Result</u>
Submitted samples	EN71-1:2014 for mechanical and physical properties	Pass
	EN71-1:2014+A1:2018 for mechanical and physical properties	Pass
	EN71-2 : 2011+A1:2014 Flammability test	Pass
Tested component(s) of submitted samples	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
	EN71-3:2013+A1:2014 on migration of certain elements	Pass
	EN71-3:2013+A1:2014 on migration of certain elements (excluding lead migration) & lead migration of EU 2017/738 amending 2009/48/EC(effective from Oct 28,2018)	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
	Phthalates content requirement in Annex XVII Items 51 & 52 of the REACH Regulation (EC) No. 1907/2006 & Amendment No. 552/2009 & Amendment Commission Regulation (EU) 2018/2005 (formerly known as Directive 2005/84/EC)	Pass#

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To be continued

Approved:




Zhou Rui Bin  
Technical Manager

Approved:



Huang Hui Hua  
Technical Support Assistant Manager



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**Test Report**

Conclusion:

Tested sample  
Tested component(s) of  
submitted samples

Test Item  
Phthalates Content

Result  
See Test  
Conducted 9#

Standard  
Polycyclic Aromatic Hydrocarbons (PAHs) Content Requirement  
In Annex XVII Item 50 of the REACH Regulation (EC) NO.  
1907/2006 & Amendment No. 552/2009 and 1272/2013 with  
effect from 27 December 2015

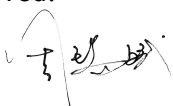
Pass

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# : This test in the report is not included in the CNAS accreditation schedule for our laboratory.

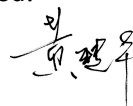
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Approved:




Zhou Rui Bin  
Technical Manager

Approved:



Huang Hui Hua  
Technical Support Assistant Manager



**Test Report**

Number: GZHH00311495

Tests Conducted

1 Physical and Mechanical Tests

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

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	NA
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
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



**Test Report**

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Tests Conducted

Clause	Testing Items	Assessment
5.14	Straps intended to be worn fully or partially around the neck	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	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

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

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**Test Report**

Number: GZHH00311495

Tests Conducted

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 accompanying 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 on the packaging and toy.
- Importer's address was on the packaging.
- Product identification code was on the packaging.
- the CE-marking on the packaging was in a correct format.

Date sample received : Jan 16, 2019  
Testing period : Jan 16, 2019 to Jan 24, 2019

2 Physical and Mechanical Tests

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

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	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



**Test Report**

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Tests Conducted

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
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 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



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Tests Conducted

Clause	Testing Items	Assessment
7.24	Sledges with cords for pulling	NA
7.25	Flying toys	NA
7.26	Improvised projectiles	NA

Remark: P = Pass NA = Not Applicable

# = 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 and toy.
- Manufacturer's address was on the packaging.
- Importer's name was on the packaging and toy.
- Importer's address was on the packaging.
- Product identification code was on the packaging.
- the CE-marking on the packaging was in a correct format.

Date sample received: Jan 16, 2019

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

3 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: Jan 16, 2019

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

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**Test Report**

Number: GZHH00311495

Tests Conducted

4 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)	(2)	(3)	(7)		
Aluminium (Al)	5615	16439	3838	8397	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)	10941	311	200	10187	100	46000

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**Test Report**

Number: GZHH00311495

Tests Conducted

Element	Result (mg/kg)		Reporting Limit (mg/kg)	Limit (mg/kg)
	Tested Component			
	(8)	(12)		
Aluminium (Al)	3546	12171	300	70000
Antimony (Sb)	ND	ND	10	560
Arsenic (As)	ND	ND	10	47
Barium (Ba)	ND	ND	10	18750
Boron (B)	ND	ND	50	15000
Cadmium (Cd)	ND	ND	5	17
Chromium (III) (Cr III) **	ND	ND	10	460
Chromium (VI) (Cr VI) **	ND	ND <sup>#</sup>	0.025	0.2/0.053 <sup>◎</sup>
Cobalt (Co)	ND	ND	10	130
Copper (Cu)	ND	ND	10	7700
Lead (Pb)	ND	ND	10	23
Manganese (Mn)	ND	ND	10	15000
Mercury (Hg)	ND	ND	10	94
Nickel (Ni)	ND	ND	10	930
Selenium (Se)	ND	ND	10	460
Strontium (Sr)	ND	ND	100	56000
Tin (Sn)	ND	ND	2.5	180000
Organic tin **	ND	ND	2.0	12
Zinc (Zn)	283	10727	100	46000

Element	Result (mg/kg)		Reporting Limit (mg/kg)	Limit (mg/kg)
	Tested Component			
	(6), (11), (13)to(19)			
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 <sup>◎</sup>
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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**Test Report**

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Tests Conducted

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):

- (1) Coatings (metallic maroon, black, white, silver-grey, silver color) on metal (body, cover of engine, carriage, door of #31094).
- (2) Coatings (silver-grey, silver color) on plastic (edge of chassis of #31094) (sample weight : 78.1mg).
- (3) Coatings (bright silver color, metallic pink, metallic blue, gold color) on plastic (engine, carriage, wheel, mirror, inner body, logo, front, exhaust pipe of #31094).
- (4) @ Coatings (black, white) on plastic (window of #31094, headlight of #32530).
- (5) @ Coatings (silver color, bright silver color, red, yellow, black) on plastic (cab, brake of wheel, rear of #31094).
- (6) Black 70°PVC plastic (tire of wheel of #31094, #31037).
- (7) Coatings (dull gold color, gold color, silver color, grey) on metal (body, door, cover of carriage, engine of #31037).
- (8) Coatings (bright silver color, red, black, white) on plastic (rear, front, logo, exhaust pipe, carriage, engine, mirror, cab, steering wheel of #31037, wheel, exhaust pipe, cab, steering wheel, engine, front of #32530).
- (9) @ Coatings (gold color, bright silver color) on plastic (wheel of #31037).
- (10) @ White coating on PVC plastic (tire of wheel of #31037, #32530).
- (11) Black 60°PVC plastic (tire of wheel of #32530).
- (12) Coatings (metallic dark red, silver color, white) on metal (body, cover of carriage, engine, door of #32530).
- (13) White paper label with transparent plastic film and inaccessible coatings (sticker of #31094, #32530) (sample weight : 10.1mg).
- (14) Transparent plastic (window of #32530, headlight of #32530).
- (15) Transparent black plastic (window of #31094, #31037).
- (16) Dull white plastic excluding coatings (engine, carriage, edge of chassis, wheel, exhaust pipe, rear, logo, side body of #31094, exhaust pipe, front, rear, engine, carriage, steering wheel, cab, door of #31037, wheel, exhaust pipe, engine, steering wheel, front of #32530).

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**Test Report**

Number: GZHH00311495

Tests Conducted

Tested Component(s):

- (17) Black plastic (chassis, cab, door, seat, rear, mirror, front of #31094, #31037, chassis, cab, door, seat, carriage of #32530).
- (18) Black soft plastic (safe belt of #31094).
- (19) Light grey plastic (brake disc of wheel of #31094).

@: 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: Jan 16, 2019

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

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**Test Report**

Number: GZHH00311495

Tests Conducted

5 19 Toxic Element Migration Test

(A) Test Result

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

Category (III): Scraped-off toy material

Element	Result (mg/kg)				Reporting limit (mg/kg)	Limit (mg/kg)
	Tested component					
	(1)	(2)	(3)	(7)		
Aluminium (Al)	5615	16439	3838	8397	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	0.1	0.2
Cobalt (Co)	ND	ND	ND	ND	10	130
Copper (Cu)	ND	ND	ND	ND	10	7700
Lead (Pb)	ND	ND	ND	ND	10	160/23ø
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	1.0	180000
Organic tin **	ND	ND	ND	ND	2.0	12
Zinc (Zn)	10941	311	200	10187	100	46000

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**Test Report**

Number: GZHH00311495

Tests Conducted

Element	Result (mg/kg)		Reporting limit (mg/kg)	Limit (mg/kg)
	Tested component			
	(8)	(12)		
Aluminium (Al)	3546	12171	300	70000
Antimony (Sb)	ND	ND	10	560
Arsenic (As)	ND	ND	10	47
Barium (Ba)	ND	ND	10	18750
Boron (B)	ND	ND	50	15000
Cadmium (Cd)	ND	ND	5	17
Chromium (III) (Cr III) **	ND	ND	10	460
Chromium (VI) (Cr VI) **	ND	ND#	0.1	0.2
Cobalt (Co)	ND	ND	10	130
Copper (Cu)	ND	ND	10	7700
Lead (Pb)	ND	ND	10	160/230
Manganese (Mn)	ND	ND	10	15000
Mercury (Hg)	ND	ND	10	94
Nickel (Ni)	ND	ND	10	930
Selenium (Se)	ND	ND	10	460
Strontium (Sr)	ND	ND	100	56000
Tin (Sn)	ND	ND	1.0	180000
Organic tin **	ND	ND	2.0	12
Zinc (Zn)	283	10727	100	46000

Element	Result (mg/kg)		Reporting limit (mg/kg)	Limit (mg/kg)
	Tested component			
	(6), (11), (13)to(19)			
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	160/230
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		1.0	180000
Organic tin **	ND		2.0	12
Zinc (Zn)	ND		100	46000

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**Test Report**

Number: GZHH00311495

Tests Conducted

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.  
∅ = The new lead migration limit [(2.0mg/kg for Category (I), 0.5mg/kg for category (II) and 23 mg/kg for Category (III)] were quoted from directive (EU) 2017/738 amending 2009/48/EC effective from 28 October 2018.  
# = 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):

- (1) Coatings (metallic maroon, black, white, silver-grey, silver color) on metal (body, cover of engine, carriage, door of #31094).
- (2) Coatings (silver-grey, silver color) on plastic (edge of chassis of #31094) (sample weight : 78.1mg).
- (3) Coatings (bright silver color, metallic pink, metallic blue, gold color) on plastic (engine, carriage, wheel, mirror, inner body, logo, front, exhaust pipe of #31094).
- (4) @ Coatings (black, white) on plastic (window of #31094, headlight of #32530).
- (5) @ Coatings (silver color, bright silver color, red, yellow, black) on plastic (cab, brake of wheel, rear of #31094).
- (6) Black 70°PVC plastic (tire of wheel of #31094, #31037).
- (7) Coatings (dull gold color, gold color, silver color, grey) on metal (body, door, cover of carriage, engine of #31037).
- (8) Coatings (bright silver color, red, black, white) on plastic (rear, front, logo, exhaust pipe, carriage, engine, mirror, cab, steering wheel of #31037, wheel, exhaust pipe, cab, steering wheel, engine, front of #32530).
- (9) @ Coatings (gold color, bright silver color) on plastic (wheel of #31037).
- (10) @ White coating on PVC plastic (tire of wheel of #31037, #32530).
- (11) Black 60°PVC plastic (tire of wheel of #32530).
- (12) Coatings (metallic dark red, silver color, white) on metal (body, cover of carriage, engine, door of #32530).
- (13) White paper label with transparent plastic film and inaccessible coatings (sticker of #31094, #32530) (sample weight : 10.1mg).
- (14) Transparent plastic (window of #32530, headlight of #32530).
- (15) Transparent black plastic (window of #31094, #31037).
- (16) Dull white plastic excluding coatings (engine, carriage, edge of chassis, wheel, exhaust pipe, rear, logo, side body of #31094, exhaust pipe, front, rear, engine, carriage, steering wheel, cab, door of #31037, wheel, exhaust pipe, engine, steering wheel, front of #32530).

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**Test Report**

Number: GZHH00311495

Tests Conducted

Tested Component(s):

- (17) Black plastic (chassis, cab, door, seat, rear, mirror, front of #31094, #31037, chassis, cab, door, seat, carriage of #32530).
- (18) Black soft plastic (safe belt of #31094).
- (19) Light grey plastic (brake disc of wheel of #31094).

@: 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: Jan 16, 2019  
Testing period: Jan 16, 2019 to Jan 24, 2019

6 Cadmium (Cd) Content

With reference to test method 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), (3/4/5), (6+11), (7), (8/9/10), (12), (13), (14+15+16), (17+18+19)	
Cadmium (Cd)	ND	0.0005

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**Test Report**

Number: GZHH00311495

Tests Conducted

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 (less than reporting limit)

Tested Component(s):

- (1) Coatings (metallic maroon, black, white, silver-grey, silver color) on metal (body, cover of engine, carriage, door of #31094).
- (2) Coatings (silver-grey, silver color) on plastic (edge of chassis of #31094).
- (3) Coatings (bright silver color, metallic pink, metallic blue, gold color) on plastic (engine, carriage, wheel, mirror, inner body, logo, front, exhaust pipe of #31094).
- (4) Coatings (black, white) on plastic (window of #31094, headlight of #32530).
- (5) Coatings (silver color, bright silver color, red, yellow, black) on plastic (cab, brake of wheel, rear of #31094).
- (6) Black 70°PVC plastic (tire of wheel of #31094, #31037).
- (7) Coatings (dull gold color, gold color, silver color, grey) on metal (body, door, cover of carriage, engine of #31037).
- (8) Coatings (bright silver color, red, black, white) on plastic (rear, front, logo, exhaust pipe, carriage, engine, mirror, cab, steering wheel of #31037, wheel, exhaust pipe, cab, steering wheel, engine, front of #32530).
- (9) Coatings (gold color, bright silver color) on plastic (wheel of #31037).
- (10) White coating on PVC plastic (tire of wheel of #31037, #32530).
- (11) Black 60°PVC plastic (tire of wheel of #32530).
- (12) Coatings (metallic dark red, silver color, white) on metal (body, cover of carriage, engine, door of #32530).
- (13) White paper label with transparent plastic film and inaccessible coatings (sticker of #31094, #32530).
- (14) Transparent plastic (window of #32530, headlight of #32530).
- (15) Transparent black plastic (window of #31094, #31037).
- (16) Dull white plastic excluding coatings (engine, carriage, edge of chassis, wheel, exhaust pipe, rear, logo, side body of #31094, exhaust pipe, front, rear, engine, carriage, steering wheel, cab, door of #31037, wheel, exhaust pipe, engine, steering wheel, front of #32530).
- (17) Black plastic (chassis, cab, door, seat, rear, mirror, front of #31094, #31037, chassis, cab, door, seat, carriage of #32530).
- (18) Black soft plastic (safe belt of #31094).
- (19) Light grey plastic (brake disc of wheel of #31094).

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**Test Report**

Number: GZHH00311495

Tests Conducted

Remark:

The Cadmium content test of the tested components (3), (4), (5), (8), (9), (10) were conducted in composite for the materials which sample size is not sufficient to carry out the test individually.

Date sample received: Jan 16, 2019

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

7 Phthalate Content

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

For 6 phthalate

Test Item	CAS No.	Result (%)	Reporting Limit (%)	Limit (%)
		Tested component (1)to(4), (5+6+7), (8+9+10), (11+12)		
Dibutyl phthalate (DBP)	84-74-2	ND	0.01	--
Di-(2-ethyl hexyl) phthalate (DEHP)	117-81-7	ND	0.01	--
Benzyl butyl phthalate (BBP)	85-68-7	ND	0.01	---
Sum of DBP, DEHP and BBP	--	ND	--	0.1
Di-iso-nonyl phthalate (DINP)	28553-12-0/ 68515-48-0	ND	0.01	--
Di-n-octyl phthalate(DNOP)	117-84-0	ND	0.01	--
Di-iso-decyl phthalate (DIDP)	26761-40-0/ 68515-49-1	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 (less than reporting limit)

Tested Component(s):

- (1) Coatings (metallic maroon, black, white, silver-grey, silver color, bright silver color, metallic pink, metallic blue, gold color, white, red, yellow) on metal/plastic (body, cover of engine, carriage, door, edge of chassis, wheel, mirror, inner body, logo, front, exhaust pipe, window, cab, brake of wheel, rear of #31094, headlight of #32530).
- (2) Coatings (dull gold color, gold color, silver color, grey, bright silver color, red, black, white) on metal/plastic (body, door, cover of carriage, engine, rear, front, logo, exhaust pipe, carriage, engine, mirror, cab, steering wheel, wheel of #31037, wheel, exhaust pipe, cab, steering wheel, engine, front of #32530, pattern of tire of wheel of #31037, #32530).
- (3) Coatings (metallic dark red, silver color, white) on metal (body, cover of carriage, engine, door of #32530).

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**Test Report**

Number: GZHH00311495

Tests Conducted

Tested Component(s):

- (4) White paper label with transparent plastic film and inaccessible coatings (sticker of #31094, #32530).
- (5) Transparent plastic (window of #32530, headlight of #32530).
- (6) Transparent black plastic (window of #31094, #31037).
- (7) Dull white plastic excluding coatings (engine, carriage, edge of chassis, wheel, exhaust pipe, rear, logo, side body of #31094, exhaust pipe, front, rear, engine, carriage, steering wheel, cab, door of #31037, wheel, exhaust pipe, engine, steering wheel, front of #32530).
- (8) Black plastic (chassis, cab, door, seat, rear, mirror, front of #31094, #31037, chassis, cab, door, seat, carriage of #32530).
- (9) Black soft plastic (safe belt of #31094).
- (10) Light grey plastic (brake disc of wheel of #31094).
- (11) Black 70°PVC plastic (tire of wheel of #31094, #31037).
- (12) Black 60°PVC plastic (tire of wheel of #32530).

Date sample received: Jan 16, 2019 & Jan 21, 2019  
Testing period: Jan 16, 2019 to Jan 23, 2019

8 Phthalate Content

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

For 7 phthalate

Test Item	CAS No.	Result (%)	Reporting Limit (%)	Limit (%)
		Tested component (1)to(4), (5+6+7), (8+9+10), (11+12)		
Dibutyl phthalate (DBP)	84-74-2	ND	0.01	--
Di-(2-ethyl hexyl) phthalate (DEHP)	117-81-7	ND	0.01	--
Benzyl butyl phthalate (BBP)	85-68-7	ND	0.01	---
Diisobutyl phthalate (DIBP)	84-69-5	ND	0.01	
Sum of DBP, DEHP, BBP and DIBP	--	ND	--	0.1
Di-iso-nonyl phthalate (DINP)	28553-12-0/ 68515-48-0	ND	0.01	--
Di-n-octyl phthalate (DNOP)	117-84-0	ND	0.01	--
Di-iso-decyl phthalate (DIDP)	26761-40-0/ 68515-49-1	ND	0.01	--
Sum of DINP, DNOP and DIDP	--	ND	--	0.1

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**Test Report**

Number: GZHH00311495

Tests Conducted

The above limit was quoted according to Annex XVII Items 51 & 52 of the REACH Regulation (EC) No. 1907/2006 & Amendment No. 552/2009 & Amendment Commission Regulation (EU) 2018/2005 for phthalate content in articles (formerly known as Directive 2005/84/EC).

For toys and childcare articles, DIBP limit was quoted from Commission Regulation (EU) 2018/2005 effective from 7 July 2020.

ND = Not detected (less than reporting limit)

Tested Component(s):

- (1) Coatings (metallic maroon, black, white, silver-grey, silver color, bright silver color, metallic pink, metallic blue, gold color, white, red, yellow) on metal/plastic (body, cover of engine, carriage, door, edge of chassis, wheel, mirror, inner body, logo, front, exhaust pipe, window, cab, brake of wheel, rear of #31094, headlight of #32530).
- (2) Coatings (dull gold color, gold color, silver color, grey, bright silver color, red, black, white) on metal/plastic (body, door, cover of carriage, engine, rear, front, logo, exhaust pipe, carriage, engine, mirror, cab, steering wheel, wheel of #31037, wheel, exhaust pipe, cab, steering wheel, engine, front of #32530, pattern of tire of wheel of #31037, #32530).
- (3) Coatings (metallic dark red, silver color, white) on metal (body, cover of carriage, engine, door of #32530).
- (4) White paper label with transparent plastic film and inaccessible coatings (sticker of #31094, #32530).
- (5) Transparent plastic (window of #32530, headlight of #32530).
- (6) Transparent black plastic (window of #31094, #31037).
- (7) Dull white plastic excluding coatings (engine, carriage, edge of chassis, wheel, exhaust pipe, rear, logo, side body of #31094, exhaust pipe, front, rear, engine, carriage, steering wheel, cab, door of #31037, wheel, exhaust pipe, engine, steering wheel, front of #32530).
- (8) Black plastic (chassis, cab, door, seat, rear, mirror, front of #31094, #31037, chassis, cab, door, seat, carriage of #32530).
- (9) Black soft plastic (safe belt of #31094).
- (10) Light grey plastic (brake disc of wheel of #31094).
- (11) Black 70°PVC plastic (tire of wheel of #31094, #31037).
- (12) Black 60°PVC plastic (tire of wheel of #32530).

Date sample received: Jan 16, 2019 & Jan 21, 2019

Testing period: Jan 16, 2019 to Jan 23, 2019

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**Test Report**

Number: GZHH00311495

Tests Conducted

9 Phthalates Content

By solvent extraction and followed by Gas Chromatographic-Mass Spectrometric (GC-MS) analysis.

Test item	Result (%)	Reporting limit (%)
	Tested component	
	(1)to(4), (5+6+7), (8+9+10), (11+12)	
Di-n-hexyl phthalate (DnHP)	ND	0.01
Di-iso-butyl phthalate (DIBP)	ND	0.01
Di-cyclohexyl phthalate (DCHP)	ND	0.01
Di-n-pentyl phthalate (DPENP)	ND	0.01

ND = Not Detected

Tested Component(s):

- (1) Coatings (metallic maroon, black, white, silver-grey, silver color, bright silver color, metallic pink, metallic blue, gold color, white, red, yellow) on metal/plastic (body, cover of engine, carriage, door, edge of chassis, wheel, mirror, inner body, logo, front, exhaust pipe, window, cab, brake of wheel, rear of #31094, headlight of #32530).
- (2) Coatings (dull gold color, gold color, silver color, grey, bright silver color, red, black, white) on metal/plastic (body, door, cover of carriage, engine, rear, front, logo, exhaust pipe, carriage, engine, mirror, cab, steering wheel, wheel of #31037, wheel, exhaust pipe, cab, steering wheel, engine, front of #32530, pattern of tire of wheel of #31037, #32530).
- (3) Coatings (metallic dark red, silver color, white) on metal (body, cover of carriage, engine, door of #32530).
- (4) White paper label with transparent plastic film and inaccessible coatings (sticker of #31094, #32530).
- (5) Transparent plastic (window of #32530, headlight of #32530).
- (6) Transparent black plastic (window of #31094, #31037).
- (7) Dull white plastic excluding coatings (engine, carriage, edge of chassis, wheel, exhaust pipe, rear, logo, side body of #31094, exhaust pipe, front, rear, engine, carriage, steering wheel, cab, door of #31037, wheel, exhaust pipe, engine, steering wheel, front of #32530).
- (8) Black plastic (chassis, cab, door, seat, rear, mirror, front of #31094, #31037, chassis, cab, door, seat, carriage of #32530).
- (9) Black soft plastic (safe belt of #31094).
- (10) Light grey plastic (brake disc of wheel of #31094).
- (11) Black 70°PVC plastic (tire of wheel of #31094, #31037).
- (12) Black 60°PVC plastic (tire of wheel of #32530).

Date sample received: Jan 16, 2019 & Jan 21, 2019

Testing period: Jan 16, 2019 to Jan 23, 2019

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**Test Report**

Number: GZHH00311495

Tests Conducted

10 Polycyclic Aromatic Hydrocarbons (PAHs) Content

With reference to AfPS GS 2014:01 PAK (PAH), PAHs content was determined by Gas Chromatography-Mass Spectrometry (GC-MS).

Test item	Result (mg/kg)	Reporting limit (mg/kg)	Limit (mg/kg)
	Tested component		
	(1)to(6), (7+8), (9+10), (11), (12+13), (14+15)		
Benzo[a]anthracene	ND	0.1	0.5
Chrysene	ND	0.1	0.5
Benzo[b]fluoranthene	ND	0.1	0.5
Benzo[k]fluoranthene	ND	0.1	0.5
Benzo[a]pyrene	ND	0.1	0.5
Dibenzo[a,h]anthracene	ND	0.1	0.5
Benzo[j]fluoranthene	ND	0.1	0.5
Benzo[e]pyrene	ND	0.1	0.5

ND= Not detected (less than reporting limit)

Tested Component(s):

- (1) Coatings (metallic maroon, black, white, silver-grey, silver color) on metal (body, cover of engine, carriage, door of #31094).
- (2) Coatings (silver-grey, silver color) on plastic (edge of chassis of #31094).
- (3) Coatings (dull gold color, gold color, silver color, grey) on metal (body, door, cover of carriage, engine of #31037).
- (4) Coatings (bright silver color, red, black, white) on plastic (rear, front, logo, exhaust pipe, carriage, engine, mirror, cab, steering wheel of #31037, wheel, exhaust pipe, cab, steering wheel, engine, front of #32530).
- (5) Coatings (metallic dark red, silver color, white) on metal (body, cover of carriage, engine, door of #32530).
- (6) White paper label with transparent plastic film and inaccessible coatings (sticker of #31094, #32530).
- (7) Transparent black plastic (window of #31094, #31037).
- (8) Black plastic (chassis, cab, door, seat, rear, mirror, front of #31094, #31037, chassis, cab, door, seat, carriage of #32530).
- (9) Black soft plastic (safe belt of #31094).
- (10) Light grey plastic (brake disc of wheel of #31094).
- (11) Black 60°PVC plastic (tire of wheel of #32530).
- (12) Dull white plastic with coatings (bright silver color, metallic pink, metallic blue, gold color, silver color, red, yellow) (engine, carriage, edge of chassis, wheel, exhaust pipe, rear, logo, side body, cab, brake of wheel of #31094)

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**Test Report**

Number: GZHH00311495

Tests Conducted

Tested Component(s):

- (13) Transparent plastic with coatings (black, white) (window of #32530, headlight of #32530).
- (14) Dull white plastic with coatings (gold color, bright silver color) (wheel, exhaust pipe, front, rear, engine, carriage, steering wheel, cab, door of #31037, wheel, exhaust pipe, engine, steering wheel, front of #32530).
- (15) Black 60°PVC plastic with white coating (tire of wheel of #32530, pattern of #31037).

Date sample received: Jan 16, 2019 & Jan 21, 2019

Testing period: Jan 16, 2019 to Jan 23, 2019

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**Test Report**

Number: GZHH00311495

Tests Conducted



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End of report

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