

Test Report

No.T51710190065JP

Date: FEB 24, 2017

Test Requested		Conclusion
1.	EN 71-3:2013 + A1:2014 – Safety of toys – Part 3 – Migration of certain elements (All conclusive testing) (Selected test items as specified by the applicant, please refer to test result page(s) for details)	PASS
2.	ASTM F963-16 - Standard Consumer Safety Specification on Toy Safety – Heavy Elements content (Selected test items as specified by the applicant, please refer to test result page(s) for details)	--
	Heavy Elements content in paint or similar surface coating materials in submitted sample in accordance with ASTM F963-16 - Standard Consumer Safety Specification on Toy Safety, Clause 4.3.5.1	PASS
3.	Japan Toy Safety Standard: Part 3: 2016 First edition 2016.4.1 (Selected specimen(s) was/were tested as specified by the applicant, please refer to test result page(s) for details) (Selected test items as specified by the applicant, please refer to test result page(s) for details)	--
	Clause 1.5 Paint coating, Vinyl chloride resin coating - Soluble Heavy metals	PASS

***** FOR FURTHER DETAILS, PLEASE REFER TO THE FOLLOWING PAGE(S) *****

Signed for and on behalf of
SGS-CSTC Standards Technical
Services Co., Ltd. Shenzhen Branch Testing Center



Feng Shaohong, Jessica
Lab Manager

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Results:

1. EN 71-3:2013 + A1:2014 – Safety of toys – Part 3 – Migration of Certain Elements

Category III: Scrapped-off toy material

Method: With reference to EN71-3:2013 + A1:2014. Analysis of general elements was performed by ICP-OES. Chromium (III) was obtained by calculation, chromium (VI) was analyzed by IC-UV/VIS and organic tin was analyzed by GC-MS.

Test Item(s)	Result(s)	MDL	Permissible Limit
Specimen No.	1	--	--
Mass of trace amount (mg)	--	--	--
Soluble Aluminium (Al) (mg/kg)	79	50	70000
Soluble Antimony (Sb) (mg/kg)	ND	10	560
Soluble Arsenic (As) (mg/kg)	ND	10	47
Soluble Barium (Ba) (mg/kg)	ND	50	18750
Soluble Boron (B) (mg/kg)	ND	50	15000
Soluble Cadmium (Cd) (mg/kg)	ND	5	17
Soluble Chromium (Cr) (mg/kg)	ND	0.15	--
Soluble Chromium (III) (Cr (III)) (mg/kg)	ND	1	460
Soluble Chromium (VI) (Cr (VI)) (mg/kg)	ND	0.12	0.2
Soluble Cobalt (Co) (mg/kg)	ND	10	130
Soluble Copper (Cu) (mg/kg)	ND	50	7700
Soluble Lead (Pb) (mg/kg)	ND	10	160
Soluble Manganese (Mn) (mg/kg)	ND	50	15000
Soluble Mercury (Hg) (mg/kg)	ND	10	94
Soluble Nickel (Ni) (mg/kg)	ND	10	930
Soluble Selenium (Se) (mg/kg)	ND	10	460
Soluble Strontium (Sr) (mg/kg)	ND	50	56000
Soluble Tin (Sn) (mg/kg)	ND	3.3	180000
Soluble Organic Tin -- (mg/kg)	ND	--	12
Soluble Zinc (Zn) (mg/kg)	ND	50	46000

Specimen Description:

1. Green wet paint

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- Note:
- mg/kg = milligram per kilogram
 - mg = milligram
 - ND = Not Detected (lower than MDL)
 - MDL = Method Detection Limit
 - 1% = 10000 mg/kg = 10000 ppm
 - Result(s) of specimen No. 1 is(are) calculated based on the status as received.

2. ASTM F963-16, Clause 4.3.5.1 – Heavy Elements in Paint/Similar Surface Coating Materials

Method: With reference to ASTM F963-16 Clause 8.3

Analysis was performed by Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES)

Soluble Heavy Metal Content

Test Item(s)				Pb	Sb	As	Ba	Cd	Cr	Hg	Se
MDL (ppm)				5	5	2.5	10	5	5	5	10
Migration Limit (ppm)				90	60	25	1000	75	60	60	500
Specimen No.	Alias No.	Tracing No.	Mass of trace amount (mg)	Adjusted Migration Result(s) (ppm)							
1	2	1	/	ND	ND	ND	ND	ND	ND	ND	ND

Specimen Description:

1. Green wet paint

- Note:
- ppm = parts per million
 - 1% = 10000 mg/kg = 10000 ppm = 10000 µg/g
 - MDL = Method Detection Limit
 - ND = Not Detected (lower than MDL)
 - Migration results of eight elements shown are of the adjusted analytical results
 - Result(s) of specimen No. 1 is(are) calculated based on the status as received for Soluble Heavy metal Content.

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3. Japan Toy Safety Standard: Part 3: 2016 First edition 2016.4.1

Method: As specified in Japan Toy Safety Standard: Part 3: 2016 First edition 2016.4.1

Clause 1.5 Paint coating, Vinyl chloride resin coating applied to the body or the components of the toys (excluding the printing ink used for paper containers)

Test Items		Pb	Sb	As	Ba	Cd	Cr	Hg	Se
MDL (mg/kg)		5	5	2.5	10	5	5	5	10
Limit (mg/kg)		90	60	25	1000	75	60	60	500
Specimen No.	Mass of trace amount (mg)	Adjusted Migration Result(s) (mg/kg)							
1	/	ND	ND	ND	ND	ND	ND	ND	ND

Specimen Description:

1. Green wet paint

- Note:
- mg/kg = milligram per kilogram
 - mg = milligram
 - MDL = Method Detection Limit
 - ND = Not Detected (lower than MDL)
 - / = > 100mg
 - Results of soluble elements shown are of the adjusted analytical results