

TEST REPORT

Number: BKKH14015924

Jan 06, 2015

Date:

Applicant: PLAN CREATIONS CO., LTD.

8 MOO 8, TRANG-PALIAN RD.,

YANTAKAO, TRANG, THAILAND 92140 ATTN: K.NARONG, K.SUPAPORN

Sample description:

One (1) set of submitted sample said to be FAMILY GROWTH CHART

Item Name: FAMILY GROWTH CHART

Item Number: 8610

Date Sample Received: December 09, 2014
Date information Resubmitted: January 05, 2015



Test conducted:

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

To be continued

Authorized by:

For Intertek Testing Services (Thailand)

Ladtaka Wongwiboonporn Laboratory Manager

Hardlines Department

Intertek Testing Services (Thailand) Ltd.

5/1 Soi Chaloem Suk, Chankasem, Chatuchak, Bangkok 10900 Thailand Tel.: (662) 930-6554, (662) 939-0661 Fax: (662) 939-0191

 $\hbox{E-mail Address: $\underline{tfh.thailand@intertek.com}$}$



TEST REPORT

Number: BKKH14015924
Conclusion:

<u>Tested samples</u> <u>Standard - U.S. ASTM F963-11</u> <u>Result</u>

Submitted sample U.S. ASTM F963-11 for Physical and mechanical tests Pass

U.S. ASTM F963-11 for flammability test of materials Pass

other than textile materials

Heavy Elements Test Pass

Standard - U.S. CFR title 16

(CPSC regulations) Pass

Part 1303 total Lead content

Standard

U.S. Consumer product safety improvement Pass

Act 2008(H.R. 4040) Title I, Section 101 For total lead content in surface coating

U.S. Consumer product safety improvement Pass

Act 2008(H.R. 4040) Title I, Section 101

For total lead content in non-surface coating material (substrate)

U.S. Consumer product safety improvement Pass

Act 2008(H.R. 4040) Title I, Section 108 Requirement on phthalates

Phthalate Content Requirement base Pass

on the California Proposition 65

Illinois Lead Poisoning Prevention Pass

Act 410 ILCS 45 section 6 (public act 095-1019)

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TEST REPORT

Remark:

- 1 As requested by the applicant, phthalate test was conducted only on components listed in this report. Other components were not tested. However, according to CPSIA FAG, the prohibition of phthalate content under CPSIA applies to all parts of a product.
- 2 The toxic elements of ASTM F963-11 was not conducted on the below components of samples. Applicant claimed the components were tested on our previous test report. Details were as below.
- 3 The total lead (Pb) content in surface coating and total lead (Pb) content in substrate materialnon-metal children's product was not conducted on the below components of samples. Applicant claimed the components were tested on our previous test report. Details were as below.
- 4 The Phthalate content of CPSIA and California Proposition 65 was not conducted on the below components of samples. Applicant claimed the components were tested on our previous test report. Details were as below.

Components ASTM			Report No.	<u>Date</u>
	LAQUER WATER BASE		BKKH14006467S2	Oct 31, 2014
	Print Ink Green		BKKH14011119S1	,
5320018	PRINT INK WHITE		BKKH14015070	Nov 24, 2014
	Sawdust wood		BKKH14009012	Jul 09, 2014
5280192	ROPE COTTON BRAID #	<i>‡</i> 6	BKKH14000323	Jan 14, 2014
Lead in surface	e coating			
5020038	LAQUER WATER BASE		BKKH14006467S2	Oct 31, 2014
5329156	Print Ink Green		BKKH14011119S1	Nov 05, 2014
5320018	PRINT INK WHITE		BKKH14015070	Nov 24, 2014
Lead in substra	<u>ate</u>			
	Sawdust wood		BKKH14009012	Jul 09, 2014
5280192	ROPE COTTON BRAID #	# 6	BKKH14000323	Jan 14, 2014
5200207/	5203912/5200084	STEEL	BKKH14016084	Dec 18, 2014
Phthalate cont	<u>ent</u>			
	Sawdust wood		BKKH14009012	Jul 09, 2014
5320018	PRINT INK WHITE		BKKH14006466S2	Oct 31, 2014
5020038	LAQUER WATER BASE		BKKH14006467S2	Oct 31, 2014
5329156	Print Ink Green		BKKH14011119S1	Nov 05, 2014

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TEST REPORT

Test conducted:

1 Physical And Mechanical Tests

As per the ASTM Standard Consumer Safety Specification for Toy Safety F963-11.

Applicant's specified age group for testing: Age over 3 years

The submitted samples were undergone the use and abuse tests in accordance with the Federal

Hazardous Substances Act (FHSA), Title 16, Code of Federal Regulations : -

 Test
 FHSA
 Parameter

 Drop test
 Section 1500.53(b)
 4 x 3.0 ft

 Torque test
 Section 1500.53(e)
 4 in-lbf

 Tension test
 Section 1500.53(f)
 15 lbf

<u>Section</u>	Testing items	Assessment
4.1	Material quality (visual check on cleanliness)	Р
4.5	Sound-producing toys	NA
4.6.1	Toys intended for children under 36 months (small objects)	NA
4.6.2	Mouth-actuated toys	NA
4.6.3	Toys and games for 36 months to 72 months (small part warning)	Р
4.7	Accessible edges	Р
4.8	Projections	NA
4.9	Accessible points	Р
4.10	Wires or rods	NA
4.11	Nails and fasteners	Р
4.12	Packaging film	NA
4.13	Folding mechanisms and hinges	NA
4.14	Cords, straps and elastics	NA
4.15	Stability and over-load requirements	NA
4.16	Confined spaces	NA
4.17	Wheels, tires and axles	NA
4.18	Holes, clearance, and accessibility of mechanisms	NA
4.19	Simulated protective devices	NA
4.20	Pacifiers	NA
4.21	Projectile toys	NA
4.22	Teethers and teething toys	NA

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TEST REPORT

Test conducted:

Section	<u>Testing items</u>	<u>Assessment</u>
4.23	Rattles	NA
4.24	Squeeze toys	NA
4.25	Battery-operated toys	NA
4.26	Toys intended to be attached to a crib or playpen	NA
4.27	Stuffed and beanbag-type toys	NA
4.28	Stroller and carriage toys	NA
4.29	Art materials	NA
4.30	Toy gun marking	NA
4.31	Balloons	NA
4.32	Certain toys with nearly spherical ends	NA
4.33	Marbles	NA
4.34	Balls	NA
4.35	Pompoms	NA
4.36	Hemispheric-shaped objects	NA
4.37	Yoyo elastic tether toys	NA
4.38	Magnets	NA
4.39	Jaw entrapment in handles and steering wheels	NA
5	Labelling requirement	Р
6	Instructional literature	NA
7	Producer's markings	
	- name of producer toy and package	Yes
	- address (package)	Yes

Remark: P = Pass NA = Not applicable

The submitted samples were undergone the tests in accordance with section 8.5 through section 8.17 and 8.19 through 8.26 on normal use, abuse and specific tests for different types of toys whichever is applicable.

Testing period: December 10, 2014 to December 16, 2014

2 Flammability Test

As per Section 4.2 of the ASTM Standard Consumer Safety Specification for Toy Safety F963-11

Results: Did Not Ignite

Testing period: December 10, 2014 to December 16, 2014

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TEST REPORT

Test conducted:

3 Heavy Elements Analysis in Surface Coating

As per Section 4.3.5.1 of the ASTM Standard Consumer Safety Specification on Toy Safety F963-11 , CPSC-CH-E1003-09.1 and extraction methods were used and heavy elements content were determined by Inductively Coupled Argon Plasma Spectrometry.

			Result	LOD	<u>LOQ</u>	<u>Limit</u>
			mg/kg	mg/kg	mg/kg	mg/kg
	(1)	(2)	(3)			
Total Lead (Pb)	< 10	< 13	< 13	2	13	90
Sol. Barium (Ba)	< 4	< 4	< 4	0.7	4	1000
Sol. Lead (Pb)	< 4	< 4	ND	0.7	4	90
Sol. Cadmium (Cd)	< 4	< 4	ND	0.7	4	75
Sol. Antimony (Sb)	< 2	< 2	ND	8.0	2	60
Sol. Selenium (Se)	< 2	< 2	ND	0.4	2	500
Sol. Chromium (Cr)	< 4	< 4	ND	0.7	4	60
Sol. Mercury (Hg)	< 3	< 3	ND	1	3	60
Sol. Arsenic (As)	< 1	< 2	ND	0.8	2	25

Remark: Sol. = Soluble

< = Less than

mg/kg = Milligram per kilogram based on weight of sample; = ppm = Parts per million

LOD = Limit of Detection LOQ = Limit of Quantitation

ND = Not detected (Less than LOD)

Tested components:

(1) =	5020038	LAQUER WATER BASE	Refer	BKKH14006467S2
(2) =	5329156	Print Ink Green	Refer	BKKH14011119S1
(3) =	5320018	PRINT INK WHITE	Refer	BKKH14015070

Note: The results of soluble toxic elements were adjusted by subtracting the analytical correction factor.

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TEST REPORT

Test conducted:

Heavy Elements Analysis in Non-Surface Coating Materials (Substrate except modelling clay) As per Section 4.3.5.2(2)(b) of the ASTM Standard Consumer Safety Specification on Toy Safety F963-11, CPSC-CH-E1001-08.3, CPSC-CH-E1002-08.3 and acid extraction method was used and heavy elements migration content were determined by Inductively Coupled Argon Plasma Spectrometry.

			Result	LC	D LOQ	<u>Limit</u>
			mg/kg	mg/	/ <mark>kg mg/kg</mark>	mg/kg
	(4)	(5)				
Total Lead (Pb)	< 10	< 10		1	13	100
Sol. Barium (Ba)	< 4	< 4		0.	7 4	1000
Sol. Lead (Pb)	< 4	< 4		0.	7 4	90
Sol. Cadmium (Cd)	< 4	< 4		0.	7 4	75
Sol. Antimony (Sb)	< 2	< 2		0.	8 2	60
Sol. Selenium (Se)	< 2	< 2		0.	4 2	500
Sol. Chromium (Cr)	< 4	< 4		0.	7 4	60
Sol. Mercury (Hg)	< 3	< 3		1	3	60
Sol. Arsenic (As)	< 1	< 1		0.	8 2	25

Remark: Sol. = Soluble

< = Less than

mg/kg = Milligram per kilogram = ppm = Parts per million

LOD = Limit of Detection LOQ = Limit of Quantitation

ND = Not detected (Less than LOD)

Tested components:

(4) = Sawdust wood Refer BKKH14009012 (5) = 5280192 ROPE COTTON BRAID #6 Refer BKKH14000323

 $Note: The \ results \ of \ soluble \ toxic \ elements \ were \ adjusted \ by \ subtracting \ the \ analytical \ correction \ factor.$

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TEST REPORT

Test conducted:

4 Total Lead (Pb) content

As per U.S. Code of Federal Regulations title 16 Part 1303. Acid digestion method was used and total Lead content was determined by Inductively Couple Plasma Optical Emission Spectrometry.

Tested component	<u>Result</u>	<u>LOD</u> <u>LOQ</u>	<u>Limit</u>
	<u>%</u>	<u>%</u>	<u>%</u>
(1)	< 0.001	0.0002 0.0013	0.009
(2)	< 0.0013	0.0002 0.0013	0.009
(3)	< 0.0013	0.0002 0.0013	0.009

Remark: % = percentage

< = Less than

LOD = Limit of Detection LOQ = Limit of Quantitation

ND = Not detected (Less than LOD)

Tested components:

 (1) =
 5020038
 LAQUER WATER BASE
 Refer
 BKKH14006467S2

 (2) =
 5329156
 Print Ink Green
 Refer
 BKKH14011119S1

 (3) =
 5320018
 PRINT INK WHITE
 Refer
 BKKH14015070

5 Total lead (Pb) content in surface coating

As per U.S. Consumer Product Safety Improvement Act of 2008 (H.R. 4040), Title I, Section 101 for children's products containing Lead, CPSC-CH-E1003-09.1 method was used and total Lead content was determined by Inductively Couple Plasma Optical Emission Spectrometry.

Tested component	<u>Result</u>	<u>LOD</u>	<u>LOQ</u>	<u>Limit</u>
	<u>mg/kg</u>	<u>mg/kg</u>	mg/kg	<u>mg/kg</u>
(1)	< 10	2	13	90
(2)	< 13	2	13	90
(3)	< 13	2	13	90

Remark: < = Less than

mg/kg = Milligram per kilogram based on weight of sample; = ppm = Parts per million

LOD = Limit of Detection LOQ = Limit of Quantitation

ND = Not detected (Less than LOD)

Tested components:

 (1) =
 5020038
 LAQUER WATER BASE
 Refer
 BKKH14006467S2

 (2) =
 5329156
 Print Ink Green
 Refer
 BKKH14011119S1

 (3) =
 5320018
 PRINT INK WHITE
 Refer
 BKKH14015070

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TEST REPORT

Test conducted:

6 Total Lead (Pb) Content in Substrate Material- Children's Metal Product

As per U.S. Consumer Product Safety Improvement Act of 2008 (H.R. 4040), Title I, Section 101 for children's products containing Lead, CPSC-CH-E1001-08.3 method was used and total Lead c ontent was determined by Inductively Couple Plasma Optical Emission Spectrometry.

Tested component	<u>Result</u>	LOD	<u>LOQ</u>	<u>Limit</u>
	<u>mg/kg</u>	mg/kg	mg/kg	<u>mg/kg</u>
(1)	ND	2	13	100

Remark: <= Less than

mg/kg = Milligram per kilogram = ppm = Parts per million

LOD = Limit of Detection LOQ = Limit of Quantitation

ND = Not detected (Less than LOD)

Tested components:

(1) = 5200207/5203912/5200084 STEEL Refer BKKH14016084

Total lead (Pb) content in substrate material- non-metal children's product

As per U.S. Consumer product safety improvement Act of 2008 (H.R. 4040), Title I, Section 101 for children's products containing lead, CPSC-CH-E1002-08.3 method was used and total lead content was determined by Inductively Couple Plasma Optical Emission Spectrometry.

Tested component	<u>Result</u>	<u>LOD</u>	<u>LOQ</u>	<u>Limit</u>
	<u>mg/kg</u>	mg/kg	mg/kg	<u>mg/kg</u>
(2)	< 10	1	13	100
(3)	< 10	1	13	100

Remark: <= Less than

mg/kg = Milligram per kilogram = ppm = Parts per million

LOD = Limit of Detection LOQ = Limit of Quantitation

ND = Not detected (Less than LOD)

Tested components:

(2) = Sawdust wood Refer BKKH14009012 (3) = 5280192 ROPE COTTON BRAID #6 Refer BKKH14000323

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TEST REPORT

Test conducted:

7 Phthalate content

As per CPSC-CH-C1001-09.3 and U.S. Consumer Product Safety Improvement Act 2008 (H.R. 4040), Title I, Section 108 requirement on Phthalates, solvent extraction method was used and Phthalate content was determined by Gas Chromatographic-Mass Spectrometric (GC-MS) analysis.

(I) For children's toy or child care article

			<u>Limit</u>		
			<u>(%, w/w)</u>		
	(1)	(2)	(3)	(4)	
Dibutyl Phthalate (DBP)	< 0.003	< 0.003	< 0.003	< 0.003	0.1
Diethyl hexyl Phthalate (DEHP)	< 0.003	< 0.003	< 0.003	0.0123	0.1
Benzyl butyl Phthalate (BBP)	< 0.003	< 0.003	< 0.003	< 0.003	0.1

(II) For children's toy that can be placed in a child's mouth or child care article

			<u>Limit</u>		
			(%, w/w)		
	(1)	(2)	(3)	(4)	
Di-iso-nonyl Phthalate (DINP)	< 0.003	< 0.003	< 0.003	< 0.009	0.1
Di-n-octyl Phthalate (DNOP)	< 0.003	< 0.003	< 0.003	< 0.003	0.1
Di-iso-decyl Phthalate (DIDP)	< 0.003	< 0.003	< 0.003	< 0.009	0.1

Remark: < = Less than

Reporting limit = 0.003% (For DINP, DIDP = 0.009%)

ND = Not detected (Less than reporting limit)

Tested components:

(1) =		Sawdust wood	Refer	BKKH14009012
(2) =	5320018	PRINT INK WHITE	Refer	BKKH14006466S2
(3) =	5020038	LAQUER WATER BASE	Refer	BKKH14006467S2
(4) =	5329156	Print Ink Green	Refer	BKKH14011119S1

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TEST REPORT

Number: BKKH14015924
Test conducted:

8 Phthalate content test

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

			Result		<u>Limit</u>
			(%, w/w)		<u>(%, w/w)</u>
	(1)	(2)	(3)	(4)	
Dibutyl Phthalate (DBP)	< 0.003	ND	ND	ND	0.1
Diethyl hexyl Phthalate (DEHP)	< 0.003	ND	ND	0.0123	0.1
Benzyl butyl Phthalate (BBP)	< 0.003	ND	ND	ND	0.1
Di-iso-nonyl Phthalate (DINP)	< 0.003	ND	ND	ND	0.1
Dioctyl Phthalate (DNOP)	< 0.003	ND	ND	ND	0.1
Di-iso-decyl Phthalate (DIDP)	< 0.003	ND	ND	ND	0.1
Di-n-hexyl Phthalate (DnHP)	< 0.003	ND	ND	ND	0.1

Remark: < = Less than

Reporting limit = 0.003% (For DINP, DIDP = 0.009%)

ND = Not detected (Less than reporting limit)

Note: The above limit was quoted according to the California Proposition 65

Tested components:

(1) =	•	Sawdust wood	Refer	BKKH14009012
(2) =	5320018	PRINT INK WHITE	Refer	BKKH14006466S2
(3) =	5020038	LAQUER WATER BASE	Refer	BKKH14006467S2
(4) =	5329156	Print Ink Green	Refer	BKKH14011119S1

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TEST REPORT

Test conducted:

9 Total Lead (Pb) Content

As per Illinois Lead poisoning prevention act 410 ILCS 45 section 6 (public act 095-1019), acid digestion method was used and total Lead content was determined by Inductively Couple Plasma Optical Emission Spectrometry.

I Surface coating material

Tested component	<u>Result</u>	<u>LOD</u>	LOQ	<u>Limit</u>
	<u>mg/kg</u>	mg/kg	mg/kg	mg/kg
(1)	< 10	2	13	90
(2)	< 13	2	13	90
(3)	< 13	2	13	90

Remark: <= Less than

mg/kg = Milligram per kilogram based on weight of sample; = ppm = Parts per million

LOD = Limit of Detection LOQ = Limit of Quantitation

ND = Not detected (Less than LOD)

Requirement: According to Illinois Lead poisoning prevention act 410 ILCS 45 section 6

(public act 095-019), appropriate warning statement is required when the Lead content of the submitted sample is more than 40 ppm but less than 90 ppm for surface coatings and less than 100 ppm for substrates by total weight or a lower standard for Lead content as may be established by federal

or state law or regulation.

Tested components:

(1)	=	5020038	LAQUER WATER BASE	Refer	BKKH14006467S2		
(2)	=	5329156	Print Ink Green	Refer	BKKH14011119S1		
(3)	=	5320018	PRINT INK WHITE	Refer	BKKH14015070		

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TEST REPORT

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Test conducted:

Non-surface coating material (substrate)

Tested component	<u>Result</u> mg/kg	<u>LOD</u> mg/kg	<u>LOQ</u> mg/kg	<u>Limit</u> mg/kg
(4)	< 10	2	13	100
(5)	< 10	2	13	100
(6)	ND	2	13	100

Remark: < = Less than

mg/kg = Milligram per kilogram = ppm = Parts per million

LOD = Limit of Detection LOQ = Limit of Quantitation

ND = Not detected (Less than LOD)

Requirement: According to Illinois Lead poisoning prevention act 410 ILCS 45 section 6

> (public act 095-019), appropriate warning statement is required when the Lead content of the submitted sample is more than 40 ppm but less than 90 ppm for surface coatings and less than 100 ppm for substrates by total weight or a lower standard for Lead content as may be established by federal

or state law or regulation.

Tested components:

(4)	=		Sawdust wood		Refer	BKKH14009012
(5)	=	5280192	ROPE COTTON BRA	AID #6	Refer	BKKH14000323
(6)	=	5200207/	5203912/5200084	STEEL	Refer	BKKH14016084

LOD and LOQ value in this test report were effective since October, 2014 Note:

Number: BKKH14015924

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