

廠商會檢定中心

TEST REPORT

Report No Date: 12 Oct 2018 AW2019478(9)

Application No LW217121(3)

Applicant KING YIP (DONG GUAN) PRINTING & PACKAGING FACTORY LTD.

DANING ADMINISTRATIVE DISTRICT, HUMEN,

TOWN, DONGGUAN, GUANGDONG

Sample Description Two (2) groups of submitted samples stated to be:

(A) One (1) item of toy sample.

: Birds in a Book Item Name **ISBN** : 9781419733932 P.O. No. : 131540-4 : Oct 2018 Manufacture Date No. of Samples submitted: 6 pieces

Client advise Age grading: Over 8 years old

Country of Origin: China

One (1) Coating samples (refer to page 13 for details) stated to be used for (A).

Date Received 09 Oct 2018, 12 Oct 2018.

Test Period 09 Oct 2018 to 12 Oct 2018.

ASTM F963-17 Standard of Consumer Safety Specification for Toy Safety: Test Requested I.

- Physical and Mechanical Tests;

- Flammability Test;

- Heavy Elements Test (Clause 4.3.5);

II. U.S. Consumer Product Safety Improvement Act of 2008 - Sec. 101:

Children's Products Containing Lead; Lead Paint Rule;

III. 16 CFR Part 1307 - Prohibition of Children Toys and Child Care Articles

Containing Specified Phthalates;

IV. Di (2-Ethylhexyl) Phthalate (DEHP), Butyl Benzyl Phthalate (BBP), Di-Butyl Phthalate (DBP), Di-(iso-decyl) Phthalate (DIDP) and Di-n-hexyl Phthalate (DnHP) content stated in the consent judgment No. BG07350969

based on the California Proposition 65;

EN71: Part 1: 2014 (E) - Physical and Mechanical Properties; V.

VI.

EN71 : Part 2 : 2011 + A1 : 2014 (E) - Flammability test; EN71 : Part 3 : 2013 + A2 : 2017(E) - Migration of certain elements VII. (Aluminium, Antimony, Arsenic, Barium, Boron, Cadmium, Chromium (III), Chromium (VI), Cobalt, Copper, Lead, Manganese, Mercury, Nickel,

Selenium, Strontium, Tin, Organic Tin and Zinc);

VIII. Regulation (EC) No. 1907/2006 of the European Parliament and of the Council, Annex XVII and its amendment Regulation (EC) No.552/2009,

(EU) No.2015/326 - Phthalates contents;

or and on behalf of

Mubiao Testing and Certification Laboratory (Shenzhen) Limited

Authorized Signature:

On hang Jingde Samuel EASsistant Manager Toys and Material Division

Sun Xiaoqing / Grace Assistant Manager Toys and Material Division

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Yubiao Testing and Certification Laboratory (Shenzhen) Limited



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Test Requested IX. Regulation (EC) No. 1907/2006 of the European Parliament and of the

Council, Annex XVII, Entry 23 and its amendment Regulation (EC) No.552/2009, (EU) No. 494/2011, No.835/2012 and No.2016/217

- Cadmium content

X. Regulation (EC) No. 1907/2006 of the European Parliament and of the Council, Annex XVII, Entry 50 and its amendment Regulation (EC) No

552/2009, (EU) No.1272/2013, No.2015/326 - Polycyclic aromatic

hydrocarbons content;

AS/NZS 8124: Part 1: 2016 - Safety Aspects Related to Mechanical and XI.

Physical Properties;

AS/NZS 8124 : Part 2 : 2016 - Flammability; XII.

AS/NZS 8124 : Part 3 : 2012 + Amdt 1 : 2016 - Migration of Certain XIII.

Elements.

Test Method I. As stated in the above specification. Acid digestion followed by

Atomic Absorption Spectrophotometry and Inductively Coupled Plasma Spectrometry (ICP-OES) analysis for total lead analysis. Diluted acid extraction followed by Inductively Coupled Plasma Spectrometry (ICP-OES) analysis for soluble heavy element

analysis;

With reference to CPSC-CH-E1003-09.1, CPSC-CH-E1002-08.3 II.

> and CPSC-CH-E1001-08.3, followed by Atomic Absorption Spectrophotometry and Inductively Coupled Plasma Spectrometry

(ICP-OES) analysis:

III to IV. With reference to CPSC-CH-C1001-09.4, followed by Gas

Chromatography - Mass Spectrometer (GC-MS) analysis;

V to VII. As stated in above specifications. Heavy metal analysis was

determined by Inductively Coupled Plasma Spectrometry (ICP-OES)

and Liquid Chromatograph-Inductively Coupled Plasma Mass

Spectrometry (LC-ICP-MS);

VIII. Phthalate analysis was determined by Gas Chromatography; IX.

Acid digestion followed by Inductively Coupled Plasma

Spectrometry (ICP-OES) analysis;

With reference to AfPS GS 2014: 01 PAK; X.

XI to XIII. As stated in the above specifications. Heavy metal analysis was

determined by Inductively Coupled Plasma Spectrometry (ICP-

OES).

Test Result Refer to the results on page 4 to 12.

For and on behalf of

Yubiao Testing and Certification Laboratory (Shenzhen) Limited

Authorized Signature:

Ouyang Jingde / Samuel Assistant Manager Toys and Material Division

Sun Xiaoqing / Grace Assistant Manager Toys and Material Division

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Conclusion Test Item Result

> I. ASTM F963-17

> > Passed - Physical and Mechanical Tests - Flammability Test Passed - Heavy Elements Test (Clause 4.3.5) Passed Passed

II. U.S. Consumer Product Safety Improvement Act of 2008 -

III. 16 CFR Part 1307 - Prohibition of Children Toys and Child Passed Care Articles Containing Specified Phthalates

IV. DEHP, BBP, DBP, DIDP and DnHP content stated in the consent judgment No. BG07350969 based on the California

Proposition 65

EN71 : Part 1 : 2014(E) EN71 : Part 2 : 2011 + A1 : 2014(E) Passed VI. Passed VII. Passed

EN71 : Part 3 : 2013+ A2 : 2017(E) Regulation (EC) No. 1907/2006 of the European Parliament VIII. and of the Council, Annex XVII and its amendment

Regulation (EC) No.552/2009, (EU) NO.2015/326 - Phthalates contents

Regulation (EC) No. 1907/2006 of the European Parliament IX.

and of the Council, Annex XVII, Entry 23 and its amendment Regulation (EC) No.552/2009, (EU) No. 494/2011, No.835/2012 and No.2016/217

- Cadmium content

X. Regulation (EC) No. 1907/2006 of the European Parliament

and of the Council, Annex XVII, Entry 50 and its amendment Regulation (EC) No 552/2009, (EU)

No.1272/2013, No.2015/326

- Polycyclic aromatic hydrocarbons content XI. AS/NZS 8124: Part 1: 2016

Passed AS/NZS 8124: Part 2: 2016 XII. Passed AS/NZS 8124: Part 3: 2012 + Amdt 1: 2016 XIII. Passed

For and on behalf of

Yubiao Testing and Certification Laboratory (Shenzhen) Limited

Authorized Signature:

Ouyang Jingde / Samuel Assistant Manager Toys and Material Division

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Passed

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Passed

Passed



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Test Result :

Tested age group : For ages over 8 years old

I. ASTM F963-17

a. Physical and Mechanical Tests

Clause	Title/Description	Remark*
4.1	Material Quality - Visual Inspection	C
4.7	Accessible edges 16 CFR 1500.49 Sharp metal or glass edges	C
4.11	Nails and fasteners	C
4.12	Plastic film	C
5	Labeling requirements	
5.16	Promotional materials	C
6	Instructional literature	
6.1	Definition and description	C
7	Producer's markings	
7.1	Producer's markings	C

Remark: The sample(s) were subjected to the normal use and abuse tests in according with Clause 8.5 Normal Use Testing, 8.7 Impact test, 8.8 Torque test, 8.9 Tension test, 8.10 Compression test and 8.12 Flexure test whichever was applicable.

b. Flammability Test

<u>Clause</u>	<u>Title/Description</u>	Remark*
4.2	Flammability 16 CFR 1500 3 (c) (6) (vi)	C

Materials other than textiles

Test method: Annex A5 (16 CFR 1500.44)

The burning rate of the most severe part = DNI.

Note: Maximum permissible burning rate = 0.1 in/sec.

DNI = Did Not Ignite

* Abbreviation : C = Complied

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I. ASTM F963-17

c. Heavy Elements Test

<u>Clause</u> <u>Title/Description</u> <u>Remark*</u>

4.3.5.1 (1) Paint and Similar Surface-Coating, total lead C

<u>Test Item</u>	Total Lead
Permissible Limit (mg/kg)	90
Sample	Test Result (mg/kg)
1	<15

4.3.5.1 (2) Paint and Similar Surface-Coating, soluble heavy elements

C

<u>Test Item</u>	As	Hg	Se	Cd	Sb	Pb	Cr	Ba
Maximum Permissible Limit (mg/kg)	25	60	500	75	60	90	60	1000
Sample	Test Result (mg/kg)							
9	NA	NA	NA	NA	NA	NA	NA	NA

4.3.5.2 (2)(a) Toy substrate materials, total lead content

C

<u>Test Item</u>	Total Lead
Maximum Permissible Limit (mg/kg)	100
Sample	Test Result (mg/kg)
2	<15
3	<15
	120

4.3.5.2 (2)(b) Toy substrate materials, soluble heavy elements

C

Test Item	As	Hg	Se	Cd	Sb	Pb	Cr	Ba
Maximum Permissible Limit (mg/kg)	25	60	500	75	60	90	60	1000
Sample	Test Result (mg/kg)							
2	<5	<5	<5	<5	<5	<5	<5	< 20
3	<5	<5	<5	<5	<5	<5	<5	< 20

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I. ASTM F963-17

c. Heavy Elements Test

Sample	2	3	9
Sample weight	≥100mg	≥100mg	<10mg

Note: • < denotes less than

• ≥ denotes greater than or equal to

• NA denotes not applicable

• As = Arsenic; Hg = Mercury; Se = Selenium; Cd = Cadmium; Sb = Antimony; Pb = Lead; Cr = Chromium; Ba = Barium

• The samples with available sample weight less than 10 mg were not tested according to U.S. ASTM Standard F963-17 (Clause 8.3.3.6 (2))

II. Consumer Product Safety Improvement Act of 2008 - Sec. 101: Children's Products Containing Lead; Lead Paint Rule

For paint and similar surface-coating materials

<u>Test Item</u>	Total Lead
Permissible Limit (mg/kg)	90
Sample	Test result (mg/kg)
1	<15

For materials and substrate

<u>Test Item</u>	Total Lead
Permissible Limit (mg/kg)	100
Sample	Test result (mg/kg)
2	<15
3	<15
4	<15

Note: • < denotes less than

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III. 16 CFR Part 1307 - Prohibition of Children Toys and Child Care Articles Containing Specified Phthalates

Test Item	DEHP	DBP	BBP	DINP	DIBP	DPENP	DHEXP	DCHP
Maximum Limit (% w/w)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Sample	Result (% w/w)							
1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
3	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01

Note: • < denotes less than

• % w/w denotes percentage by weight

• DEHP = Di (2-ethylhexyl) Phthalate; DBP = Dibutyl Phthalate; BBP = Butyl Benzyl Phthalate; DINP = Diisononyl Phthalate; DIBP = diisobutyl phthalate; DPENP = di-n-pentyl phthalate; DHEXP = di-n-hexyl phthalate; DCHP = dicyclohexyl phthalate

IV. DEHP, BBP, DBP, DIDP and DnHP content

Test item	,	Test Results (%) Sample	Maximum	
<u>rest item</u>	1	<u>Sample</u>	3	permissible level (%)
Di (2-ethylhexyl) Phthalate (DEHP)	< 0.01	< 0.01	< 0.01	0.1*
Butyl Benzyl Phthalate (BBP)	< 0.01	< 0.01	< 0.01	0.1*
Di-Butyl Phthalate (DBP)	< 0.01	< 0.01	< 0.01	0.1*
Di-(iso-decyl)Phthalate (DIDP)	< 0.01	< 0.01	< 0.01	0.1*
Di-n-hexyl Phthalate (DnHP)	< 0.01	< 0.01	< 0.01	0.1*

Note:

- % w/w denotes percentage by weight
- < denotes less than
- * The limit is referred to the consent judgment no. BG07350969 based on the California Proposition 65 (Superior Court of the State of California, county of Alameda), for toys and child care articles

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Tested age group : For ages over 8 years old

V. EN71: Part 1: 2014(E)

Clause	Title/Description	Remark*
4	General requirements	
4.1	Material cleanliness	C
4.7	Edges	C
4.8	Points and metallic wires	C
6	Packaging	C
7	Warnings, markings and instructions for use	
7.1	General	C

VI. EN71: Part 2: 2011 + A1: 2014(E)

ClauseTitle/DescriptionRemark*4.1General requirementsC

Note: No cellulose nitrate and material with same behaviour in fire

was detected

*Abbreviation : C = Complied

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VII. EN 71: Part 3: 2013+A2: 2017(E)

Category III - Scraped-off toy material

		Test Result (mg/kg)								
Element	Migration limit (mg/kg)	Sample								
	(2 2)	2	3	5	6	7	8	9		
Aluminium (Al)	70,000	<100	110	<100	<100	<100	1141	NA		
Antimony (Sb)	560	<5	<5	<5	<5	<5	<5	NA		
Arsenic (As)	47	<5	<5	<5	<5	<5	<5	NA		
Barium (Ba)	18,750	< 20	< 20	< 20	< 20	< 20	<20	NA		
Boron (B)	15,000	<100	<100	<100	<100	<100	<100	NA		
Cadmium (Cd)	17	<5	<5	<5	<5	<5	<5	NA		
Chromium (III)	460	<1*	<1	<1	<1	<1	2*	NA		
Chromium (VI)	0.2	< 0.15*	< 0.15	< 0.15	< 0.15	< 0.15	<0.15*	NA		
Cobalt (Co)	130	<5	<5	<5	<5	<5	<5	NA		
Copper (Cu)	7,700	<5	13	<5	<5	<5	6	NA		
Lead (Pb)	160	<5	<5	<5	<5	<5	<5	NA		
Manganese (Mn)	15,000	<100	<100	<100	<100	<100	<100	NA		
Mercury (Hg)	94	<5	<5	<5	<5	<5	<5	NA		
Nickel (Ni)	930	<5	<5	<5	<5	<5	<5	NA		
Selenium (Se)	460	<5	<5	<5	<5	<5	<5	NA		
Strontium (Sr)	56,000	<100	<100	<100	<100	<100	<100	NA		
Tin (Sn)	180,000	< 2.5	< 2.5	< 2.5	<2.5	< 2.5	<2.5	NA		
Organic tin	12	-	-	-	-	-	-	NA		
Zinc (Zn)	46,000	<100	<100	<100	<100	<100	<100	NA		

Sample	2	3	5	6	7	8	9
Sample weight	≥100mg	≥100mg	≥100mg	≥100mg	≥100mg	≥100mg	<10mg

Note:

- < denotes less than
- ≥ denotes greater than or equal to
- NA denotes not applicable
- For samples of migrated chromium content lower than migration limit of chromium (VI), no speciation test for chromium (III) and chromium (VI) were conducted. The results were derived from that of total chromium
- For samples of migrated tin content calculated as tributyl tin lower than migration limit of organic tin, no organic tin test was conducted. Organic tin results were derived from that of total tin
- The samples with available sample weight less than 10 mg were not tested according to EN 71 : Part 3:2013+A2:2017(E)
- *Chromium (VI) test was conducted. Chromium (III) result was calculated by subtracting Chromium (VI) result from Chromium result

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VIII. Regulation (EC) No. 1907/2006 of the European Parliament and of the Council, Annex XVII and its amendment Regulation (EC) No.552/2009, (EU) No.2015/326 - Phthalates contents

Test Item	DEHP	DBP	BBP	DINP	DIDP	DNOP			
Sample	Result (%w/w)								
1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01			
2	0.01 < 0.01		< 0.01 < 0.01		< 0.01	< 0.01			
3	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01			

Requirement of Regulation (EC) No. 1907/2006, Annex XVII

- 1. Concentration of DEHP, DBP and BBP of plasticized materials in toys and childcare articles shall not exceed 0.1% by weight.
- 2. Concentration of DINP, DIDP and DNOP of plasticized materials in toys and childcare articles which can be placed in the mouth by children shall not exceed 0.1% by weight.

Note: • % w/w denotes percentage by weight

- < denotes less than
- DEHP = Di (2-ethylhexyl) Phthalate; DBP = Dibutyl Phthalate; BBP = Butyl Benzyl Phthalate; DINP = Diisononyl Phthalate; DIDP = Diisodecyl Phthalate; DNOP = Di-n-octyl Phthalate

IX. Regulation (EC) No. 1907/2006 of the European Parliament and of the Council, Annex XVII, Entry 23 and its amendment Regulation (EC) No.552/2009, (EU) No. 494/2011, No. 835/2012 and No.2016/217 - Cadmium content

For paints on painted articles

<u>Test item</u>	Total Cadmium
Maximum permissible level (mg/kg)	1000
Sample	Result (mg/kg)
1	<5

For plastic material

<u>Test item</u>	Total Cadmium
Maximum permissible level (mg/kg)	100
Sample	Result (mg/kg)
2	<5
3	<5

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X. Regulation (EC) No. 1907/2006 of the European Parliament and of the Council, Annex XVII, Entry 50 and its amendment Regulation (EC) No.552/2009, (EU) No. 1272/2013, No.2015/326- Polycyclic aromatic hydrocarbons content

For toys and childcare articles

PAHs		Result (mg/kg)	Permissible limit (mg/kg)
(i)	Benzo[a]anthracene	<0.1	0.5
(ii)	Chrysene	<0.1	0.5
(iii)	Benzo[b]fluoranthene	<0.1	0.5
(iv)	Benzo[k]fluoranthene	<0.1	0.5
(v)	Benzo[j]fluoranthene	<0.1	0.5
(vi)	Benzo[e]pyrene	<0.1	0.5
(vii)	Benzo[a]pyrene	<0.1	0.5
(viii)	Dibenzo[a,h]anthracene	<0.1	0.5

Note: • mg/kg denotes milligram per kilogram

< denotes less than

• Test part 9 with total mass per individual sample less than 50mg were not examined according to AfPS GS 2014: 01 test instruction clause 2.1.2.

Tested age group : For ages over 8 years old

XI. AS/NZS 8124: Part 1: 2016

Clause	<u>Title/Description</u>	Remark*
4	Requirements	
4.1	Normal use	C
4.2	Reasonably foreseeable abuse	C
4.3	Material	
4.3.1	Material quality	C
4.10	Plastic film or plastic bags in packaging and in toys	C

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XII. AS/NZS 8124: Part 2: 2016

<u>Clause</u> <u>Title/Description</u> <u>Remark*</u>

4.1 General C

Note: No cellulose nitrate and material with same behaviour

in fire was detected

* Abbreviation : C = Complied

XIII. AS/NZS 8124: Part 3: 2012 + Amdt 1: 2016

Test Item	As	Hg	Se	Cd	Sb	Pb	Cr	Ba
Maximum permissible limit (mg/kg)	25	60	500	75	60	90	60	1000
Sample		Test Result (mg/kg)						
2	<5	<5	<5	<5	<5	<5	<5	<20
3	<5	<5	<5	<5	<5	<5	<5	<20
5	<5	<5	<5	<5	<5	<5	<5	<20
6	<5	<5	<5	<5	<5	<5	<5	<20
7	<5	<5	<5	<5	<5	<5	<5	<20
8	<5	<5	<5	<5	<5	<5	<5	<20
9	NA	NA	NA	NA	NA	NA	NA	NA

Sample	2	3	5	6	7	8	9
Sample weight	≥100mg	≥100mg	≥100mg	≥100mg	≥100mg	≥100mg	<10mg

Note : • < denotes less than

- ≥ denotes greater than or equal to
- NA denotes not available
- As = Arsenic; Hg = Mercury; Se = Selenium; Cd = Cadmium; Sb = Antimony; Pb = Lead; Cr = Chromium; Ba = Barium
- The samples with available sample weight less than 10 mg were not tested according to AS/NZS 8124: Part 3: 2012 + Amdt 1: 2016 (Clause 7)

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Appendix



Test Parts :

- 1. Brown coating (used for eyelet of pages)
- 2. Transparent plastic sheet (sleeve)
- 3. White paper with multi-color printings and glue (cover)
- 4. Silvery metal (eyelet of pages)
- 5. White paper (sleeve)
- 6. White thin paper with multi-color printings (bird pattern of pages)
- 7. White thick paper with multi-color printings (pages)
- 8. Grey paper (spine)
- 9. Brown coating (eyelet of pages)

***** End of Report *****

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