

廠商會檢定中心

TEST REPORT

Report No : AW2024698(9) Date: 20 Dec 2018

Application No : LW221685(2)

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.

Item Name : Succulents in a Book ISBN : 9781419737510 P.O. No. : 132297-0 Manufacture Date : Dec 2018 No. of Samples submitted :6 pcs

Client advise Age grading: Over 8 years old

Country of Origin: China

(B) One (1) paint samples (refer to page 15 for details) stated to be used for (A).

Date Received : 14 Dec 2018, 18 Dec 2018

Test Period : 14 Dec 2018 to 19 Dec 2018

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

Safety:

- 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;

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

VI. EN71 : Part 2 : 2011 + A1 : 2014 (E) - Flammability test;

VII. EN71: Part 3: 2013 + A2: 2017(E) - Migration of certain elements

(Aluminium, Antimony, Arsenic, Barium, Boron, Cadmium, Chromium (III), Chromium (VI), Cobalt, Copper, Lead, Manganese, Mercury,

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

For and on behalf of

Mulbino Testing and Certification Laboratory (Shenzhen) Limited

Authorized Signature:

Quyang 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 VIII. 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 and No.835/2012 - Cadmium content;

IX. 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;

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

Council, Annex XVII, Entry 50 and its amendment Regulation (EC)

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

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

Physical Properties;

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

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

Elements.

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

Absorption Spectrophotometry analysis 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 and CPSC-CH-E1002-08.3 П.

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);

VIII. Acid digestion followed by Inductively Coupled Plasma Spectrometry

(ICP-OES) analysis;

IX. Phthalate analysis was determined by Gas Chromatography;

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

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

determined by Inductively Coupled Plasma Spectrometry (ICP-OES).

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

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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III.

Conclusion : Test Item Result

I. ASTM F963-17

- Physical and Mechanical Tests
- Flammability Test
- Heavy Elements Test (Clause 4.3.5)
U.S. Consumer Product Safety Improvement Act of 2008 - Sec.
Passed
Passed
Passed

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

16 CFR Part 1307 - Prohibition of Children Toys and Child

Care Articles Containing Specified Phthalates

IV. DEHP, BBP, DIDP and DnHP content stated in the Passed

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

Proposition 65

V. EN71 : Part 1 : 2014(E) Passed

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

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

VII. EN71 : Part 3 : 2013+ A2 : 2017(E)

VIII. Regulation (EC) No. 1907/2006 of the European Parliament and Passed

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

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

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

 XII.
 AS/NZS 8124 : Part 2 : 2016
 Passed

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

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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Passed



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Tested age group : For ages over 8 years old

I. ASTM F963-17

a. Physical and Mechanical Tests

Clause	<u>Title/Description</u>	Remark*
4.1	Material Quality - Visual Inspection	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>	Title/Description	Remark*
4.2	Flammability 16 CFR 1500 3 (c) (6) (vi)	С

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)
9	<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)							
1	NA	NA	NA	NA	NA	NA	NA	NA

Sample	1
Sample weight	<10mg

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

 \mathbf{C}

<u>Test Item</u>	Total Lead
Maximum Permissible Limit (mg/kg)	100
Sample	Test Result (mg/kg)
2	<15
3	<15
4	20

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I. ASTM F963-17

c. Heavy Elements Test

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

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

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

Note: • < denotes less than

- \geq 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))

Sample	2	3
Sample weight	≥100mg	≥100mg

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

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	20

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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)
9	<15

Note: • < denotes less than

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

<u>Test Item</u>	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				`	,			
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	<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		<u>Fest Results (%)</u> <u>Sample</u>	Maximum	
	<u>2</u>	<u>3</u>	9	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	<u>Title/Description</u>	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)

<u>Clause</u>	<u>Title/Description</u>	Remark*
4.1	General requirements	C

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

Note:

- < denotes less than</p>
- \geq 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

Sample	1	2	3	5	6	7	8
Sample weight	<10mg	≥100mg	≥100mg	≥100mg	≥100mg	≥100mg	≥100mg

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VIII. 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 and No. 835/2012 - Cadmium content

For paints on painted articles

<u>Test item</u>	Total Cadmium(mg/kg)
Permissible Limit (mg/kg)	1000
Sample	Test Result (mg/kg)
9	<5

For plastic material

Test item	Total Cadmium
Permissible Limit (mg/kg)	100
Sample	Test Result (mg/kg)
2	<5
3	<5

Note: • < denotes less than

• ND denotes Not Detected (Method detection limit of total cadmium is 5 mg/kg)

IX. 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		Test Result (% w/w)						
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		
9	< 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

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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		R	esult (mg/k	g)	Permissible limit (mg/kg)	
		1	2	3	r erimssible mint (mg/kg)	
(i)	Benzo[a]anthracene	NA	< 0.1	< 0.1	0.5	
(ii)	Chrysene	NA	< 0.1	< 0.1	0.5	
(iii)	Benzo[b]fluoranthene	NA	< 0.1	< 0.1	0.5	
(iv)	Benzo[k]fluoranthene	NA	< 0.1	< 0.1	0.5	
(v)	Benzo[j]fluoranthene	NA	< 0.1	< 0.1	0.5	
(vi)	Benzo[e]pyrene	NA	< 0.1	< 0.1	0.5	
(vii)	Benzo[a]pyrene	NA	< 0.1	< 0.1	0.5	
(viii)	Dibenzo[a,h]anthracene	NA	< 0.1	< 0.1	0.5	

Note: • mg/kg denotes milligram per kilogram

• < denotes less than

NA denotes Not Available

Tested age group : For ages over 8 years old

XI. AS/NZS 8124: Part 1: 2016

Clause	Title/Description	Remark*
4	Requirements	
4.1	Normal use	C
4.3	Material	
4.3.1	Material quality	C
4.10	Plastic film or plastic bags in packaging and in toys	C

XII. AS/NZS 8124: Part 2: 2016

ClauseTitle/DescriptionRemark*4.1GeneralC

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

* Abbreviation : C = Complied

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

<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)								
1	NA	NA	NA	NA	NA	NA	NA	NA		
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		

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)

Sample	1	2	3	5	6	7	8
Sample weight	<10mg	≥100mg	≥100mg	≥100mg	≥100mg	≥100mg	≥100mg



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Appendix



Test Parts :

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

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

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