

TEST REPORT

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The results relate only to the item tested.

Number: BKKH18016215S1

Applicant: PLAN CREATIONS CO., LTD.
8 MOO 8, TRANG-PALIAN RD.,
YANTAKAO, TRANG, THAILAND 92140
ATTN: K.NARONG, K.SUPAPORN

Date: Jan 18, 2019
**This report supersedes
The previous report
Date Dec 28, 2018**

Sample description:

Quantity of sample:	One (1) set
Sample description:	Wooden toy
Date sample received:	November 30, 2018
Date information received:	January 15, 2019

Client Information:

One (1) set of submitted sample said to be ELEPHANT PUZZLE

Item Name: ELEPHANT PUZZLE
Item Number: 4635



Test conducted:

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

To be continued

For and on behalf of :
Intertek Testing Services (Thailand) Ltd.,
Hardlines Laboratory

Ladtaka Wongwiboonporn

Ladtaka Wongwiboonporn
Laboratory Manager
Hardlines Department

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Conclusion:

<u>Tested samples</u>	<u>Standard</u>	<u>Result</u>
Submitted sample	U.S. ASTM F963-17 for Physical and mechanical tests excluding labelling requirement of clause 5	Pass
	U.S. ASTM F963-17 for Flammability test of materials other than textile materials	Pass
	U.S. ASTM F963-16 and ASTM F963-17 for Heavy elements Test	Pass
	U.S. Consumer product safety improvement Act 2008(H.R. 4040) Title I, Section 101 For total lead content in non-surface coating material (substrate)	Pass
	US 16 CFR Part 1307 for Prohibition of Children's Toys and Child Care Articles Containing Specified Phthalates	Pass
	Phthalate Content Requirement base on the California Proposition 65	Pass
	Illinois Lead Poisoning Prevention Act 410 ILCS 45 section 6 (public act 095-1019)	Pass

Remark: As requested by the applicant, the test was conducted only on components listed in this report. Other components were not tested.

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Remark:

The chemical test results was not conducted on the below components of samples. Applicant claimed the components were tested on our previous test report.

<u>Components</u>	<u>Report No.</u>	<u>Date</u>
<u>ASTM F963-16: Heavy metal</u>		
BLUE SAWDUST	BKKH18001625	Feb 12, 2018
BLUE SAWDUST (320C)	BKKH18001625	Feb 12, 2018
<u>ASTM F963-17: Heavy metal</u>		
SAWDUST	BKKH18016064S1	Dec 13, 2018
WARM GRAY SAWDUST	BKKH18016828	Dec 26, 2018
<u>Lead in substrate</u>		
SAWDUST	BKKH18016064S1	Dec 13, 2018
WARM GRAY SAWDUST	BKKH18016828	Dec 26, 2018
BLUE SAWDUST	BKKH18001625	Feb 12, 2018
BLUE SAWDUST (320C)	BKKH18001625	Feb 12, 2018
<u>Phthalate content</u>		
SAWDUST	BKKH18016064S1	Dec 13, 2018
WARM GRAY SAWDUST	BKKH18016828	Dec 26, 2018
BLUE SAWDUST	BKKH18001625	Feb 12, 2018
BLUE SAWDUST (320C)	BKKH18001625	Feb 12, 2018

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Test conducted:

1 Physical And Mechanical Tests▲

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

Age group for testing : For age over 18 month.

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 1500.52(b)	4 x 3.0 ft
Torque test	Section 1500.53(e)	4 in-lbf
Tension test	Section 1500.53(f)	15 lbf
Compression test	Section 1500.53(g)	30 lbf

Clause	Testing items	Assessment
4.1	Material quality	P
4.5	Sound-producing toys	NA
4.6.1	Toys intended for children under 36 months (small objects)	P
4.6.2	Mouth-actuated toys	NA
4.6.3	Toys and games for 36 months to 72 months (small part warning)	NA
4.7	Accessible edges	P
4.8	Projections	NA
4.9	Accessible points	P
4.10	Wires or rods	NA
4.11	Nails and fasteners	NA
4.12	Plastic 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 conducted:

Clause	Testing items	Assessment
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
4.40	Expanding materials	NA
4.41	Toy chests	NA
5	Labelling requirement	#
6	Instructional literature	NA
7	Producer's markings - name of producer (toy) - address (toy)	Yes No

Remark : P = Pass NA = Not applicable

▲ = Tested items are not included in the TISI Accreditation

= No final packaging was submitted for testing.

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

The producer's name was found on the toy. However as specified in clause 7.1 of ASTM F963-17, the final product or its packaging must also be marked with the address.

Testing period : November 30, 2018 to December 17, 2018

2 Flammability Test[▲]

Test Standard : Clause 4.2 of the ASTM Standard Consumer Safety Specification for Toy Safety F963-17.

Results : Did not ignite

Remark : ▲ = Tested items are not included in the TISI Accreditation

Testing period : November 30, 2018 to December 17, 2018



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Test conducted:

3 Heavy Elements Analysis

As per clause 4.3.5.2(2)(b) of the ASTM Standard Consumer Safety Specification on Toy Safety F963-16 and F963-17[▲], acid extraction method was used and heavy elements migration content were determined by ICP-OES analysis.

			<u>Result</u> <u>mg/kg</u>		<u>LOD</u> <u>mg/kg</u>	<u>LOQ</u> <u>mg/kg</u>	<u>Limit mg/kg</u>
	(1)	(2)	(3)	(4)			
Sol. Barium (Ba)	ND	ND	<5	<5	1	5	1000
Sol. Lead (Pb)	ND	ND	ND	ND	1	5	90
Sol. Cadmium (Cd)	ND	ND	ND	ND	1	5	75
Sol. Antimony (Sb)	ND	ND	ND	ND	2	5	60
Sol. Selenium (Se)	ND	ND	ND	ND	1	5	500
Sol. Chromium (Cr)	ND	ND	ND	ND	2	5	60
Sol. Mercury (Hg)	ND	ND	ND	ND	1	5	60
Sol. Arsenic (As)	ND	ND	ND	ND	2	5	25

Remark:

Sol. = Soluble
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)
< = Less than
▲ = Tested items are not included in the TISI Accreditation

Tested components:

(1) =	SAWDUST	Refer	BKKH18016064S1
(2) =	WARM GRAY SAWDUST	Refer	BKKH18016828
(3) =	BLUE SAWDUST	Refer	BKKH18001625
(4) =	BLUE SAWDUST (320C)	Refer	BKKH18001625

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

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Number: BKKH18016215S1

Test conducted:

Total Lead (Pb) Content

As per clause 4.3.5.2(2)(a) of the ASTM Standard Consumer Safety Specification on Toy Safety F963-16 and F963-17[▲], test method CPSC-CH-E1001-08.3:2012, CPSC-CH-E1002-08.3:2012 were used and total Lead content was determined by ICP-OES analysis.

(II) Non-surface coating

<u>Tested Component</u>	<u>Result</u> <u>mg/kg</u>	<u>LOD</u> <u>(mg/kg)</u>	<u>LOQ</u> <u>(mg/kg)</u>	<u>Limit</u> <u>(mg/kg)</u>
(1)	<13	1	13	100
(2)	<13	1	13	100
(3)	<13	1	13	100
(4)	<13	1	13	100

Remark: 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) < = Less than
 ▲ = Tested items are not included in the TISI Accreditation

Tested components:

(1) = SAWDUST	Refer BKKH18016064S1
(2) = WARM GRAY SAWDUST	Refer BKKH18016828
(3) = BLUE SAWDUST	Refer BKKH18001625
(4) = BLUE SAWDUST (320C)	Refer BKKH18001625

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Test conducted:

4 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-E1002-08.3:2012 method was used and total lead content was determined by Inductively Couple Plasma Optical Emission Spectrometry.☐

<u>Tested component</u>	<u>Result</u> <u>mg/kg</u>	<u>LOD</u> <u>mg/kg</u>	<u>LOQ</u> <u>mg/kg</u>	<u>Limit mg/kg</u>
(1)	<13	1	13	100
(2)	<13	1	13	100
(3)	<13	1	13	100
(4)	<13	1	13	100

Remark: 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) < = Less than

Tested components:

(1) = SAWDUST	Refer BKKH18016064S1
(2) = WARM GRAY SAWDUST	Refer BKKH18016828
(3) = BLUE SAWDUST	Refer BKKH18001625
(4) = BLUE SAWDUST (320C)	Refer BKKH18001625

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Number: BKKH18016215S1

Test conducted:

5 Phthalate content

As per CPSC-CH-C1001-09.3:2010 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.☐

	<u>Result</u> (%, w/w)				<u>LOD</u> (%, w/w)	<u>LOQ</u> (%, w/w)	<u>(16CFR1307)</u> Limit (%, w/w)	<u>NPR</u> (%, w/w)
	(1)	(2)	(3)	(4)				
Dibutyl Phthalate (DBP)	ND	ND	ND	ND	0.0015	0.0030	0.1	0.1
Di(2-ethylhexyl) phthalate (DEHP)	ND	ND	ND	ND	0.0015	0.0030	0.1	0.1
Benzyl butyl Phthalate (BBP)	ND	ND	ND	ND	0.0015	0.0030	0.1	0.1
Di-iso-nonyl Phthalate (DINP)	ND	ND	ND	ND	0.0015	0.0090	0.1	0.1
Di-n-octyl Phthalate (DNOP)	ND	ND	ND	ND	0.0015	0.0030	--	--
Di-iso-decyl Phthalate (DIDP)	ND	ND	ND	ND	0.0015	0.0090	--	--
Di-isobutyl phthalate (DIBP)▲	ND	ND	ND	ND	0.0015	0.0030	0.1	0.1
Di-n-pentyl phthalate (DPENP)▲	ND	ND	ND	ND	0.0015	0.0030	0.1	0.1
Di-n-hexyl phthalate (DHEXP)▲	ND	ND	ND	ND	0.0015	0.0030	0.1	0.1
Di-cyclohexyl phthalate (DCHP)▲	ND	ND	ND	ND	0.0015	0.0030	0.1	0.1
Diisooctyl phthalate (DIOP)▲	ND	ND	ND	ND	0.0015	0.0090	--	--

Remark : The above limit was quoted according to US 16 CFR Part 1307 for Prohibition of Children's Toys and Child Care Articles Containing Specified Phthalates except the Phthalate no.5-6,11 was conducted as per applicant requested only.

NPR = Notice of proposed rulemaking
%, w/w = Percentage weight by weight
LOD = Limit of Detection
LOQ = Limit of Quantitation
ND = Not detected (Less than LOD)
▲ = Tested items are not included in the TISI Accreditation

Tested components:

- (1) = SAWDUST
(2) = WARM GRAY SAWDUST
(3) = BLUE SAWDUST
(4) = **BLUE SAWDUST (320C)**

Refer BKKH18016064S1
Refer BKKH18016828
Refer BKKH18001625
Refer BKKH18001625



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Test conducted:

6 Phthalate content test [▲]

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

	<u>Result</u>				<u>LOD</u>	<u>LOQ</u>	<u>Limit</u>
	<u>(%, w/w)</u>				<u>(%, w/w)</u>	<u>(%, w/w)</u>	<u>(%, w/w)</u>
	(1)	(2)	(3)	(4)			
Dibutyl Phthalate (DBP)	ND	ND	ND	ND	0.0015	0.0030	0.1
Di(2-ethylhexyl) phthalate (DEHP)	ND	ND	ND	ND	0.0015	0.0030	0.1
Benzyl butyl Phthalate (BBP)	ND	ND	ND	ND	0.0015	0.0030	0.1
Di-iso-nonyl Phthalate (DINP)	ND	ND	ND	ND	0.0015	0.0090	0.1
Di-octyl Phthalate (DNOP)	ND	ND	ND	ND	0.0015	0.0030	0.1
Di-iso-decyl Phthalate (DIDP)	ND	ND	ND	ND	0.0015	0.0090	0.1
Di-n-hexyl Phthalate (DnHP)	ND	ND	ND	ND	0.0015	0.0030	0.1

Remark : %, w/w = Percentage weight by weight

 LOD = Limit of Detection

 LOQ = Limit of Quantitation

 ND = Not detected (Less than LOD)

 ▲ = Tested items are not included in the TISI Accreditation

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

Tested components:

(1) = SAWDUST

Refer BKKH18016064S1

(2) = WARM GRAY SAWDUST

Refer BKKH18016828

(3) = BLUE SAWDUST

Refer BKKH18001625

(4) = **BLUE SAWDUST (320C)**

Refer BKKH18001625

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Test conducted:

7 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.

II Non-surface coating material (substrate)

<u>Tested component</u>	<u>Result</u>	<u>LOD</u>	<u>LOQ</u>	<u>Limit</u>
	<u>mg/kg</u>	<u>mg/kg</u>	<u>mg/kg</u>	<u>mg/kg</u>
(1)	<13	1	13	100
(2)	<13	1	13	100
(3)	<13	1	13	100
(4)	<13	1	13	100

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) = SAWDUST	Refer	BKKH18016064S1
(2) = WARM GRAY SAWDUST	Refer	BKKH18016828
(3) = BLUE SAWDUST	Refer	BKKH18001625
(4) = BLUE SAWDUST (320C)	Refer	BKKH18001625

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

*****END*****/KS/ST

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