

# TEST REPORT

The report shall not be reproduced without written approval from Intertek  
The results relate only to the item tested.

Number: BKKH19002629

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

**Date:** Apr 10, 2019

### Sample description:

Quantity of sample: One (1) set  
Sample description: Wooden toy  
Date sample received: February 25, 2019  
Date information received: April 03, 2019

### Client Information:

One (1) set of submitted sample said to be HELICOPTER

Item Name: HELICOPTER  
Item Number: 6060



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### Test conducted:

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

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To be continued

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



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	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>Standard - U.S. CFR title 16</u> (CPSC regulations) Part 1303 total Lead content	Pass
	<u>Standard</u> U.S. Consumer product safety improvement Act 2008(H.R. 4040) Title I, Section 101 For total lead content in surface coating	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>		
WHITE COATING ON WOOD	BKKH18008771	Jul 12, 2018
YELLOW COATING ON WOOD	BKKH18008773	Jul 12, 2018
BROWN COATING ON WOOD	BKKH18008771	Jul 12, 2018
WHITE PLASTIC JOINT	BKKH18008761	Jul 11, 2018
<u>ASTM F963-17: Heavy metal</u>		
GRAY COATING ON WOOD	BKKH18016831	Dec 25, 2018
BLACK COATING ON WOOD	BKKH18016831	Dec 25, 2018
DARK GRAY COATING ON WOOD	BKKH18016831	Dec 25, 2018
BLACK PLASTIC	BKKH19004180	Apr 02, 2019
BLACK PLASTIC	BKKH18016414	Dec 20, 2018
<u>Lead in surface coating</u>		
WHITE COATING ON WOOD	BKKH18008771	Jul 12, 2018
YELLOW COATING ON WOOD	BKKH18008773	Jul 12, 2018
GRAY COATING ON WOOD	BKKH18016831	Dec 25, 2018
BLACK COATING ON WOOD	BKKH18016831	Dec 25, 2018
DARK GRAY COATING ON WOOD	BKKH18016831	Dec 25, 2018
BROWN COATING ON WOOD	BKKH18008771	Jul 12, 2018
<u>Lead in substrate</u>		
WHITE PLASTIC JOINT	BKKH18008761	Jul 11, 2018
BLACK PLASTIC	BKKH19004180	Apr 02, 2019
BLACK PLASTIC	BKKH18016414	Dec 20, 2018
<u>Phthalate content</u>		
WHITE PLASTIC JOINT	BKKH18008761	Jul 11, 2018
BLACK PLASTIC	BKKH18016414	Dec 20, 2018
WHITE COATING ON WOOD	BKKH18008771	Jul 12, 2018
YELLOW COATING ON WOOD	BKKH18008773	Jul 12, 2018
GRAY COATING ON WOOD	BKKH18016831	Dec 25, 2018
BLACK COATING ON WOOD	BKKH18016831	Dec 25, 2018
DARK GRAY COATING ON WOOD	BKKH18016831	Dec 25, 2018
BROWN COATING ON WOOD	BKKH18008771	Jul 12, 2018

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Test conducted:

1 Physical And Mechanical Tests<sup>▲</sup>

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

Age group for testing : For 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 : -

<u>Test</u>	<u>FHSA</u>	<u>Parameter</u>
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
Compression test	Section 1500.53(g)	30 lbf

<u>Clause</u>	<u>Testing items</u>	<u>Assessment</u>
4.1	Material quality	P
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)	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	P
6	Instructional literature	P
7	Producer's markings - name of producer (toy and package) - address (package)	Yes Yes

Remark : P = Pass NA = Not applicable

▲ = Tested items are not included in the TISI Accreditation

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.

Testing period : February 25, 2019 to February 29, 2019

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Number: BKKH19002629

Test conducted:

2 Flammability Test<sup>▲</sup>

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

<u>Sample</u>	<u>Ignition point</u>	<u>Burn length</u> (inch)	<u>Time</u> (sec)	<u>Actual</u> <u>burn rate</u> (inch/sec)	<u>Rounded burn</u> <u>rate</u> (inch/sec)	<u>Limit</u> (inch/sec)
Propeller	End to end	1.4	60	0.02	-	0.10

The above result only showed the most severe burn rate of the samples and components.

▲ = Tested items are not included in the TISI Accreditation

Testing period : February 25, 2019 to February 29, 2019

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Number: BKKH19002629

Test conducted:

7 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>					<u>LOD</u>	<u>LOQ</u>	<u>(16CFR1307)</u>	<u>NPR</u>
	(1)	(2)	(3)	(4)	(5)	(%, w/w)	(%, w/w)	Limit (%, w/w)	(%, w/w)
Dibutyl Phthalate (DBP)	ND	ND	ND	ND	ND	0.0015	0.0030	0.1	0.1
Di(2-ethylhexyl) phthalate (DEHP)	ND	ND	ND	ND	ND	0.0015	0.0030	0.1	0.1
Benzyl butyl Phthalate (BBP)	ND	ND	ND	ND	ND	0.0015	0.0030	0.1	0.1
Di-iso-nonyl Phthalate (DINP)	ND	ND	ND	ND	ND	0.0015	0.0090	0.1	0.1
Di-n-octyl Phthalate (DNOP)	ND	ND	ND	ND	ND	0.0015	0.0030	--	--
Di-iso-decyl Phthalate (DIDP)	ND	ND	ND	ND	ND	0.0015	0.0090	--	--
Di-isobutyl phthalate (DIBP) <sup>▲</sup>	ND	ND	ND	ND	ND	0.0015	0.0030	0.1	0.1
Di-n-pentyl phthalate (DPENP) <sup>▲</sup>	ND	ND	ND	ND	ND	0.0015	0.0030	0.1	0.1
Di-n-hexyl phthalate (DHEXP) <sup>▲</sup>	ND	ND	ND	ND	ND	0.0015	0.0030	0.1	0.1
Di-cyclohexyl phthalate (DCHP) <sup>▲</sup>	ND	ND	ND	ND	ND	0.0015	0.0030	0.1	0.1
Diisooctyl phthalate (DIOP) <sup>▲</sup>	ND	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) = WHITE PLASTIC JOINT	Refer	BKKH18008761
(2) = BLACK PLASTIC	Refer	BKKH18016414
(3) = WHITE COATING ON WOOD	Refer	BKKH18008771
(4) = YELLOW COATING ON WOOD	Refer	BKKH18008773
(5) = GRAY COATING ON WOOD	Refer	BKKH18016831

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Number: BKKH19002629

Test conducted:

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>			<u>LOD</u>	<u>LOQ</u>	<u>(16CFR1307)</u>	<u>NPR</u>
	<u>(%, w/w)</u>			<u>(%, w/w)</u>	<u>(%, w/w)</u>	<u>Limit (%, w/w)</u>	<u>(%, w/w)</u>
	(6)	(7)	(8)				
Dibutyl Phthalate (DBP)	0.005	ND	ND	0.0015	0.0030	0.1	0.1
Di(2-ethylhexyl) phthalate (DEHP)	ND	ND	ND	0.0015	0.0030	0.1	0.1
Benzyl butyl Phthalate (BBP)	ND	ND	ND	0.0015	0.0030	0.1	0.1
Di-iso-nonyl Phthalate (DINP)	ND	ND	ND	0.0015	0.0090	0.1	0.1
Di-n-octyl Phthalate (DNOP)	ND	ND	ND	0.0015	0.0030	--	--
Di-iso-decyl Phthalate (DIDP)	ND	ND	ND	0.0015	0.0090	--	--
Di-isobutyl phthalate (DIBP) <sup>▲</sup>	0.0047	ND	ND	0.0015	0.0030	0.1	0.1
Di-n-pentyl phthalate (DPENP) <sup>▲</sup>	ND	ND	ND	0.0015	0.0030	0.1	0.1
Di-n-hexyl phthalate (DHEXP) <sup>▲</sup>	ND	ND	ND	0.0015	0.0030	0.1	0.1
Di-cyclohexyl phthalate (DCHP) <sup>▲</sup>	ND	ND	ND	0.0015	0.0030	0.1	0.1
Diisooctyl phthalate (DIOP) <sup>▲</sup>	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:

(6) = BLACK COATING ON WOOD	Refer	BKKH18016831
(7) = DARK GRAY COATING ON WOOD	Refer	BKKH18016831
(8) = BROWN COATING ON WOOD	Refer	BKKH18008771

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Test conducted:

8 Phthalate content test<sup>▲</sup>

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

	<u>Result</u>					<u>LOD</u>	<u>LOQ</u>	<u>Limit</u>
	(1)	(2)	(3)	(4)	(5)	(%, w/w)	(%, w/w)	(%, w/w)
Dibutyl Phthalate (DBP)	ND	ND	ND	ND	ND	0.0015	0.0030	0.1
Di(2-ethylhexyl) phthalate (DEHP)	ND	ND	ND	ND	ND	0.0015	0.0030	0.1
Benzyl butyl Phthalate (BBP)	ND	ND	ND	ND	ND	0.0015	0.0030	0.1
Di-iso-nonyl Phthalate (DINP)	ND	ND	ND	ND	ND	0.0015	0.0090	0.1
Di-octyl Phthalate (DNOP)	ND	ND	ND	ND	ND	0.0015	0.0030	0.1
Di-iso-decyl Phthalate (DIDP)	ND	ND	ND	ND	ND	0.0015	0.0090	0.1
Di-n-hexyl Phthalate (DnHP)	ND	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) =	WHITE PLASTIC JOINT	Refer	BKKH18008761
(2) =	BLACK PLASTIC	Refer	BKKH18016414
(3) =	WHITE COATING ON WOOD	Refer	BKKH18008771
(4) =	YELLOW COATING ON WOOD	Refer	BKKH18008773
(5) =	GRAY COATING ON WOOD	Refer	BKKH18016831

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Test conducted:

Phthalate content test<sup>▲</sup>

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>
	(6)	(7)	(8)			
Dibutyl Phthalate (DBP)	0.005	ND	ND	0.0015	0.0030	0.1
Di(2-ethylhexyl) phthalate (DEHP)	ND	ND	ND	0.0015	0.0030	0.1
Benzyl butyl Phthalate (BBP)	ND	ND	ND	0.0015	0.0030	0.1
Di-iso-nonyl Phthalate (DINP)	ND	ND	ND	0.0015	0.0090	0.1
Diocetyl Phthalate (DNOP)	ND	ND	ND	0.0015	0.0030	0.1
Di-iso-decyl Phthalate (DIDP)	ND	ND	ND	0.0015	0.0090	0.1
Di-n-hexyl Phthalate (DnHP)	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:

(6) =	BLACK COATING ON WOOD	Refer	BKKH18016831
(7) =	DARK GRAY COATING ON WOOD	Refer	BKKH18016831
(8) =	BROWN COATING ON WOOD	Refer	BKKH18008771

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Number: BKKH19002629

Test conducted:

9 Total Lead (Pb) Content<sup>▲</sup>

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

<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	2	13	90
(2)	ND	2	13	90
(3)	ND	2	13	90
(4)	ND	2	13	90
(5)	ND	2	13	90
(6)	ND	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 items are not included in the TISI Accreditation  
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) = WHITE COATING ON WOOD     | Refer | BKKH18008771 |
| (2) = YELLOW COATING ON WOOD    | Refer | BKKH18008773 |
| (3) = GRAY COATING ON WOOD      | Refer | BKKH18016831 |
| (4) = BLACK COATING ON WOOD     | Refer | BKKH18016831 |
| (5) = DARK GRAY COATING ON WOOD | Refer | BKKH18016831 |
| (6) = BROWN COATING ON WOOD     | Refer | BKKH18008771 |

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Number: BKKH19002629

Test conducted:

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>
(7)	ND	1	13	100
(8)	<13	1	13	100
(9)	ND	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:

(7) = WHITE PLASTIC JOINT	Refer	BKKH18008761
(8) = BLACK PLASTIC	Refer	BKKH19004180
(9) = BLACK PLASTIC	Refer	BKKH18016414

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

\*\*\*\*\*END\*\*\*\*\*/KS/NK

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