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The results relate only to the item tested.



Number: BKKH17013680

Date: Dec 12, 2017

Applicant: PLAN CREATIONS CO., LTD.

8 MOO 8, TRANG-PALIAN RD.,

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

## Sample description:

Quantity of sample: One (1) set Sample description: Wooden toy

Date sample received: November 07, 2017
Date information received: December 11, 2017

#### **Client Information:**

One (1) set of submitted sample said to be SPIN N FLY AIRPLANE

Item Name: SPIN N FLY AIRPLANE

Item Number: 5197



## **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) Ltd.,

**Hardlines Laboratory** 

Ladtaka Wongwiboonporn

Laboratory Manager

**Hardlines Department** 

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lusion:

Tested samplesStandardResultSubmitted sampleU.S. ASTM F963-16 for Physical and mechanical testsPassU.S. ASTM F963-16 for Flammability test of materialsPass

U.S. ASTM F963-11 and ASTM F963-16 for Pass Heavy elements Test

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 on the California Proposition 65

Illinois Lead Poisoning Prevention Pass Act 410 ILCS 45 section 6 (public act 095-1019)

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.

Components	Report No.	<u>Date</u>
ASTM F963-11: Heavy metal		
Solid Wood	BKKH17000142	Jan 10, 2017
ASTM F963-16: Heavy metal		
WHITE COATING ON WOOD	BKKH17008950	Jul 26, 2017
YELLOW COATING ON WOOD	BKKH17008950	Jul 26, 2017
LACQUER COATING ON WOOD	BKKH17008950	Jul 26, 2017
ORANGE COATING ON WOOD	BKKH17008950	Jul 26, 2017
BLUE COATING ON WOOD	BKKH17009131	Aug 03, 2017
LIGHT BROWN COATING ON WOOD	BKKH17014798	Dec 06, 2017
BLACK COATING ON WOOD	BKKH17014798	Dec 06, 2017
GLUE	BKKH17008461	Jul 14, 2017
Lead in surface coating		
WHITE COATING ON WOOD	BKKH17008950	Jul 26, 2017
YELLOW COATING ON WOOD	BKKH17008950	Jul 26, 2017
LACQUER COATING ON WOOD	BKKH17008950	Jul 26, 2017
ORANGE COATING ON WOOD	BKKH17008950	Jul 26, 2017
BLUE COATING ON WOOD	BKKH17009131	Aug 03, 2017
LIGHT BROWN COATING ON WOOD	BKKH17014798	Dec 06, 2017
BLACK COATING ON WOOD	BKKH17014798	Dec 06, 2017
<u>Lead in substrate</u>		
SCREW	BKKH17014683	Nov 30, 2017
Solid Wood	BKKH17000142	Jan 10, 2017
GLUE	BKKH17008461	Jul 14, 2017
Phthalate content		
WHITE COATING ON WOOD	BKKH17008950	Jul 26, 2017
YELLOW COATING ON WOOD	BKKH17008950	Jul 26, 2017
LACQUER COATING ON WOOD	BKKH17008950	Jul 26, 2017
ORANGE COATING ON WOOD	BKKH17008950	Jul 26, 2017
BLUE COATING ON WOOD	BKKH17009131	Aug 03, 2017
LIGHT BROWN COATING ON WOOD	BKKH17014798	Dec 06, 2017
BLACK COATING ON WOOD	BKKH17014798	Dec 06, 2017
GLUE	BKKH17008461	Jul 14, 2017

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## Test conducted:

1 Physical And Mechanical Tests A

Test Standard: ASTM Standard Consumer Safety Specification for Toy Safety F963-16.

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 : -

 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

 Compression test
 Section 1500.53(g)
 30 lbf

<u>Clause</u>	<u>Testing items</u>	<u>Assessment</u>
4.1	Material quality	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)	NA
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	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



THAILAND

**TESTING 0417** 

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## Test conducted:

Clause	Testing items	<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
4.40	Expanding materials	NA
4.41	Toy chests	NA
5	Labelling requirement	P #
6	Instructional literature	Р
7	Producer's markings	
	- name of producer (toy and package)	Yes
	- address (package)	Yes

Remark: P = Pass F = Fail NA = Not applicable

▲ = Tested items are not included in the TISI Accreditation

# = Only artwork of packaging was provided for review.

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: November 07, 2017 to November 10, 2017

# 2 Flammability Test <sup>▲</sup>

Test Standard: Clause 4.2 of the ASTM Standard Consumer Safety Specification for Toy Safety F963-16.

Results: Did not ignite

▲ = Tested items are not included in the TISI Accreditation

Testing period: November 07, 2017 to November 10, 2017

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## Test conducted:

# 3 Heavy Elements Analysis

As per clause 4.3.5.1(2) of the ASTM Standard Consumer Safety Specification on Toy Safety F963-11 and F963-16 $^{\blacktriangle}$ , acid extraction method was used and heavy elements migration content were determined by ICP-OES analysis.

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

Remark: Sol. = Soluble

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

ND = Not detected (Less than LOD) <= Less than

▲ = Tested items are not included in the TISI Accreditation

# Tested components:

(1) =	WHITE COATING ON WOOD	Refer	BKKH17008950
(2) =	YELLOW COATING ON WOOD	Refer	BKKH17008950
(3) =	LACQUER COATING ON WOOD	Refer	BKKH17008950
(4) =	ORANGE COATING ON WOOD	Refer	BKKH17008950
(5) =	BLUE COATING ON WOOD	Refer	BKKH17009131

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





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Number: BKKH17013680

## Test conducted:

## **Heavy Elements Analysis**

As per clause 4.3.5.1(2) of the ASTM Standard Consumer Safety Specification on Toy Safety F963-11 and F963-16 $^{\blacktriangle}$ , acid extraction method was used and heavy elements migration content were determined by ICP-OES analysis.

•			<u>Result</u> mg/kg	<u>LOD</u> mg/kg	LOQ mg/kg	Limit mg/kg
	(6)	(7)				
Sol. Barium (Ba)	58	312		1	5	1000
Sol. Lead (Pb)	ND	ND		1	5	90
Sol. Cadmium (Cd)	ND	ND		1	5	75
Sol. Antimony (Sb)	ND	ND		2	5	60
Sol. Selenium (Se)	ND	ND		1	5	500
Sol. Chromium (Cr)	ND	ND		2	5	60
Sol. Mercury (Hg)	ND	ND		1	5	60
Sol. Arsenic (As)	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:

(6) =	LIGHT BROWN COATING ON WOOD	Refer	BKKH17014798
(7) =	BLACK COATING ON WOOD	Refer	BKKH17014798

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





The results relate only to the item tested.



Number: BKKH17013680

## Test conducted:

## **Heavy Elements Analysis**

As per clause 4.3.5.2(2)(b) of the ASTM Standard Consumer Safety Specification on Toy Safety F963-11 and F963-16<sup>A</sup>, acid extraction method was used and heavy elements migration content were determined by ICP-OES analysis.

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

(8) =Solid Wood Refer BKKH17000142 (9) =GLUE Refer BKKH17008461

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





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Number: BKKH17013680

## Test conducted:

## Total Lead (Pb) Content

As per clause 4.3.5.1(1) of the ASTM Standard Consumer Safety Specification on Toy Safety F963-11 and F963-16  $^{\blacktriangle}$ , test method CPSC-CH-E1003-09.1:2011 was used and total Lead content was determined by ICP-OES analysis.

# (I) Surface coating

<u>Result</u>	<u>LOD</u>	<u>LOQ</u>	<u>Limit</u>
mg/kg	<u>(mg/kg)</u>	(mg/kg)	<u>(mg/kg)</u>
ND	2	13	90
ND	2	13	90
ND	2	13	90
ND	2	13	90
<13	2	13	90
ND	2	13	90
ND	2	13	90
	mg/kg ND ND ND ND <13 ND	mg/kg         (mg/kg)           ND         2           ND         2           ND         2           ND         2           ND         2           <13	mg/kg         (mg/kg)         (mg/kg)           ND         2         13           ND         2         13           ND         2         13           ND         2         13           <13

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) =	WHITE COATING ON WOOD	Refer	BKKH17008950
(2) =	YELLOW COATING ON WOOD	Refer	BKKH17008950
(3) =	LACQUER COATING ON WOOD	Refer	BKKH17008950
(4) =	ORANGE COATING ON WOOD	Refer	BKKH17008950
(5) =	BLUE COATING ON WOOD	Refer	BKKH17009131
(6) =	LIGHT BROWN COATING ON WOOD	Refer	BKKH17014798
(7) =	BLACK COATING ON WOOD	Refer	BKKH17014798

\*



<sup>▲ =</sup> Tested items are not included in the TISI Accreditation



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Number: BKKH17013680

## 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 F963-11 and F963-16, 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

Tested Component	<u>Result</u>	<u>LOD</u> <u>LOQ</u>	<u>Limit</u>
	mg/kg	(mg/kg) (mg/kg)	(mg/kg)
(8)	ND	1 13	100
(9)	ND	1 13	100
(10)	ND	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:

(8) =	Solid Wood	Refer	BKKH17000142
(9) =	GLUE	Refer	BKKH17008461
(10) =	SCREW	Refer	BKKH17014683

\*





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## 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	Result %	LOD %	<b>LOQ</b> %	<u>Limit %</u>
(1)	ND	0.0002	0.0013	0.009
(2)	ND	0.0002	0.0013	0.009
(3)	ND	0.0002	0.0013	0.009
(4)	ND	0.0002	0.0013	0.009
(5)	<0.0013	0.0002	0.0013	0.009
(6)	ND	0.0002	0.0013	0.009
(7)	ND	0.0002	0.0013	0.009

Remark: % = percentage < = Less than

LOD = Limit of Detection LOQ = Limit of Quantitation

ND = Not detected (Less than LOD) <= Less than

## Tested components:

(1) =	WHITE COATING ON WOOD	Refer	BKKH17008950
(2) =	YELLOW COATING ON WOOD	Refer	BKKH17008950
(3) =	LACQUER COATING ON WOOD	Refer	BKKH17008950
(4) =	ORANGE COATING ON WOOD	Refer	BKKH17008950
(5) =	BLUE COATING ON WOOD	Refer	BKKH17009131
(6) =	LIGHT BROWN COATING ON WOOD	Refer	BKKH17014798
(7) =	BLACK COATING ON WOOD	Refer	BKKH17014798

\*



<sup>▲ =</sup> Tested items are not included in the TISI Accreditation



The results relate only to the item tested.



Number: BKKH17013680

## Test conducted:

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-E1003-09.1:2011 method was used and total Lead content was determined by Inductively Couple Plasma Optical Emission Spectrometry.

Tested component	<u>Result</u>	<u>LOD</u>	LOQ	<u>Limit mg/kg</u>
	mg/kg	mg/kg	mg/kg	
(1)	ND	2	13	90
(2)	ND	2	13	90
(3)	ND	2	13	90
(4)	ND	2	13	90
(5)	<13	2	13	90
(6)	ND	2	13	90
(7)	ND	2	13	90

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

> LOD = Limit of Detection LOQ = Limit of Quantitation

ND = Not detected (Less than LOD) < = Less than

# Tested components:

(1) =	WHITE COATING ON WOOD	Refer	BKKH17008950
(2) =	YELLOW COATING ON WOOD	Refer	BKKH17008950
(3) =	LACQUER COATING ON WOOD	Refer	BKKH17008950
(4) =	ORANGE COATING ON WOOD	Refer	BKKH17008950
(5) =	BLUE COATING ON WOOD	Refer	BKKH17009131
(6) =	LIGHT BROWN COATING ON WOOD	Refer	BKKH17014798
(7) =	BLACK COATING ON WOOD	Refer	BKKH17014798





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Number: BKKH17013680

## Test conducted:

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

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-E1001-08.3:2012 method was used and total Lead c ontent was determined by Inductively Couple Plasma Optical Emission Spectrometry.

Tested component	<u>Result</u>	<u>LOD</u>	LOQ	<u>Limit mg/kg</u>
	mg/kg	mg/kg	mg/kg	
(1)	ND	2	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) = SCREW Refer BKKH17014683

## 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.

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

(2) = Solid Wood Refer BKKH17000142 (3) = GLUE Refer BKKH17008461

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Number: BKKH17013680

## 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.

			Result			LOD	LOQ	Limit	NPR
			(%, w/w)			(%, w/w)	(%, w/w)	(%, w/w)	(%, w/w)
	(1)	(2)	(3)	(4)	(5)				
Dibutyl Phthalate (DBP)	ND	ND	ND	ND	ND	0.0015	0.0030	0.1	0.1
Diethyl hexyl 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	0.1	
Di-iso-decyl Phthalate (DIDP)	ND	ND	ND	ND	ND	0.0015	0.0090	0.1	
Di-isobutyl phthalate (DIBP) ▲	ND	ND	ND	ND	ND	0.0015	0.0090		0.1
Di-n-pentyl phthalate (DPENP) ▲	ND	ND	ND	ND	ND	0.0015	0.0090		0.1
Di-n-hexyl phthalate (DHEXP) ▲	ND	ND	ND	ND	ND	0.0015	0.0090		0.1
Di-cyclohexyl phthalate (DCHP) ▲	ND	ND	ND	ND	ND	0.0015	0.0090		0.1
Diisooctyl phthalate (DIOP) ▲	ND	ND	ND	ND	ND	0.0015	0.0090		

Remark: The above limit was quoted according to US Consumer Product Safety Improvement Act 2008 for prohibition on sale of certain products containing specified phthalates.

The Phthalate no.7-11 are not included in US Consumer Product Safety Improvement Act 2008 and 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 COATING ON WOOD	Refer	BKKH17008950
(2) =	YELLOW COATING ON WOOD	Refer	BKKH17008950
(3) =	LACQUER COATING ON WOOD	Refer	BKKH17008950
(4) =	ORANGE COATING ON WOOD	Refer	BKKH17008950
(5) =	BLUE COATING ON WOOD	Refer	BKKH17009131





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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.

			Result	LOD	LOQ	Limit	NPR
			(%, w/w)	<u>(%, w/w)</u>	(%, w/w)	(%, w/w)	(%, w/w)
	(6)	(7)	(8)				
Dibutyl Phthalate (DBP)	ND	ND	ND	0.0015	0.0030	0.1	0.1
Diethyl hexyl 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	0.1	
Di-iso-decyl Phthalate (DIDP)	ND	ND	ND	0.0015	0.0090	0.1	
Di-isobutyl phthalate (DIBP) ▲	ND	ND	ND	0.0015	0.0090		0.1
Di-n-pentyl phthalate (DPENP) ▲	ND	ND	ND	0.0015	0.0090		0.1
Di-n-hexyl phthalate (DHEXP) ▲	ND	ND	ND	0.0015	0.0090		0.1
Di-cyclohexyl phthalate (DCHP) ▲	ND	ND	ND	0.0015	0.0090		0.1
Diisooctyl phthalate (DIOP) ▲	ND	ND	ND	0.0015	0.0090		

Remark: The above limit was quoted according to US Consumer Product Safety Improvement Act 2008 for prohibition on sale of certain products containing specified phthalates.

The Phthalate no.7-11 are not included in US Consumer Product Safety Improvement Act 2008 and 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) =	LIGHT BROWN COATING ON WOOD	Refer	BKKH17014798
(7) =	BLACK COATING ON WOOD	Refer	BKKH17014798
(8) =	GLUE	Refer	BKKH17008461

\*





The results relate only to the item tested.



Number: BKKH17013680

## Test conducted:

#### 8 Phthalate content test

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

			Result			LOD	LOQ	Limit
			(%, w/w)			(%, w/w)	<u>(%, w/w)</u>	(%, w/w)
	(1)	(2)	(3)	(4)	(5)			
Dibutyl Phthalate (DBP)	ND	ND	ND	ND	ND	0.0015	0.0030	0.1
Diethyl hexyl 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
Dioctyl 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 COATING ON WOOD	Refer	BKKH17008950
(2) =	YELLOW COATING ON WOOD	Refer	BKKH17008950
(3) =	LACQUER COATING ON WOOD	Refer	BKKH17008950
(4) =	ORANGE COATING ON WOOD	Refer	BKKH17008950
(5) =	BLUE COATING ON WOOD	Refer	BKKH17009131









Test conducted:

# Phthalate content test

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

			Result	LOD LO	Q Limit
			(%, w/w)	<u>(%, w/w)(%, w</u>	<u>/w)</u> (%, w/w)
	(6)	(7)	(8)		
Dibutyl Phthalate (DBP)	ND	ND	ND	0.0015 0.00	30 0.1
Diethyl hexyl Phthalate (DEHP)	ND	ND	ND	0.0015 0.00	30 0.1
Benzyl butyl Phthalate (BBP)	ND	ND	ND	0.0015 0.00	30 0.1
Di-iso-nonyl Phthalate (DINP)	ND	ND	ND	0.0015 0.00	90 0.1
Dioctyl Phthalate (DNOP)	ND	ND	ND	0.0015 0.00	30 0.1
Di-iso-decyl Phthalate (DIDP)	ND	ND	ND	0.0015 0.00	90 0.1
Di-n-hexyl Phthalate (DnHP)	ND	ND	ND	0.0015 0.00	30 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

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

# Tested components:

(6) =	LIGHT BROWN COATING ON WOOD	Refer	BKKH17014798
(7) =	BLACK COATING ON WOOD	Refer	BKKH17014798
(8) =	GLUE	Refer	BKKH17008461





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Number: BKKH17013680

## 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 <u>Surface coating material</u>

Tested component	<u>Result</u>	LOD LOQ	<u>Limit</u>
	mg/kg	mg/kg mg/kg	mg/kg
(1)	ND	2 13	90
(2)	ND	2 13	90
(3)	ND	2 13	90
(4)	ND	2 13	90
(5)	<13	2 13	90
(6)	ND	2 13	90
(7)	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	BKKH17008950
(2)	=	YELLOW COATING ON WOOD	Refer	BKKH17008950
(3)	=	LACQUER COATING ON WOOD	Refer	BKKH17008950
(4)	=	ORANGE COATING ON WOOD	Refer	BKKH17008950
(5)	=	BLUE COATING ON WOOD	Refer	BKKH17009131
(6)	=	LIGHT BROWN COATING ON WOOD	Refer	BKKH17014798
(7)	=	BLACK COATING ON WOOD	Refer	BKKH17014798

\*





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#### Test conducted:

## II Non-surface coating material (substrate)

Tested component	<u>Result</u>	LOD LOQ	<u>Limit</u>
	mg/kg	mg/kg mg/kg	mg/kg
(8)	ND	1 13	100
(9)	ND	1 13	100
(10)	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:

(8)	=	Solid Wood	Refer	BKKH17000142
(9)	=	GLUE	Refer	BKKH17008461
(10)	=	SCREW	Refer	BKKH17014683

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

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