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The results relate only to the item tested.



Number: BKKH17008332S1

Date: Aug 10, 2017
This report supersedes
The previous report
Date Aug 09, 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:

Sample description:

Date sample received:

Date information received:

One (1) set

Wooden toy

July 07, 2017

August 07, 2017

#### **Client Information:**

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

Item Name: TWISTED PUZZLE

Item Number: 5649



\*



BKKH17008332S1

#### 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** 

Ladtole W

Ladtaka Wongwiboonporn

Intertek Testing Services (Thailand) Ltd.

Laboratory Manager

**Hardlines Department** 

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Number: BKKH17008332S1

| _    |          |
|------|----------|
| CONC | liicion: |
| COIL | lusion:  |

| Conclusion       |   |               |
|------------------|---|---------------|
| Tested samples   | <u>Standard</u>   | <u>Result</u> |
| Submitted sample | U.S. ASTM F963-16 for Physical and mechanical tests                               | Pass          |
|                  | U.S. ASTM F963-16 for Flammability test of materials other than textile materials | Pass          |
|                  | U.S. ASTM F963-11 and ASTM F963-16 for Heavy elements Test                        | Pass          |
|                  | Standard - LLS CER title 16   |               |

# Standard - U.S. CFR title 16

(CPSC regulations) Pass
Part 1303 total Lead content

# <u>Standard</u>

| U.S. Consumer product safety improvement<br>Act 2008(H.R. 4040) Title I, Section 101<br>For total lead content in surface coating | Pass |
|---|------|
| U.S. Consumer product safety improvement<br>Act 2008(H.R. 4040) Title I, Section 101  | Pass |
| 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 | Pass |
|------------------------------------|------|
| 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   |              |              |
| BLUE COATING ON WOOD        | BKKH16015744 | Nov 07,2016  |
| DARK GREEN COATING ON WOOD  | BKKH16015744 | Nov 07,2016  |
| Green Coating On Wood       | BKKH16016212 | Nov 17,2016  |
| Black Coating On Wood       | BKKH16016482 | Nov 24,2016  |
| 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 (8950) | BKKH17008950 | Jul 26, 2017 |
| SAWDUST WOOD                | BKKH17008452 | Jul 14, 2017 |
| WHITE PLASTIC JOINT         | BKKH17008825 | Jul 24, 2017 |
| Lead in surface coating     |              |              |
| BLUE COATING ON WOOD        | BKKH16015744 | Nov 07,2016  |
| DARK GREEN COATING ON WOOD  | BKKH16015744 | Nov 07,2016  |
| Green Coating On Wood       | BKKH16016212 | Nov 17,2016  |
| Black Coating On Wood       | BKKH16016482 | Nov 24,2016  |
| 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 (8950) | BKKH17008950 | Jul 26, 2017 |
| <u>Lead in substrate</u>    |              |              |
| Solid Wood                  | BKKH17000142 | Jan 10,2017  |
| SAWDUST WOOD                | BKKH17008452 | Jul 14, 2017 |
| WHITE PLASTIC JOINT         | BKKH17008825 | Jul 24, 2017 |
| Phthalate content           |              |              |
| BLUE COATING ON WOOD        | BKKH16015744 | Nov 07,2016  |
| DARK GREEN COATING ON WOOD  | BKKH16015744 | Nov 07,2016  |
| Green Coating On Wood       | BKKH16016212 | Nov 17,2016  |
| Black Coating On Wood       | BKKH16016482 | Nov 24,2016  |
| SAWDUST WOOD                | BKKH17008452 | Jul 14, 2017 |
| 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 (8950) | BKKH17008950 | Jul 26, 2017 |
| WHITE PLASTIC JOINT         | BKKH17008825 | Jul 24, 2017 |
| ************                | *********    |              |

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Number: BKKH17008332S1

## Test conducted:

1 Physical And Mechanical Tests \*

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                |



**TESTING 0417** 

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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                             | Р          |
| 6      | Instructional literature                          | Р          |
| 7      | Producer's markings                               |            |
|        | - name of producer (package)                      | Yes        |
|        | - address (package)                               | 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: July 07, 2017 to July 27, 2017

# Flammability Test A

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: July 07, 2017 to July 27, 2017



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Number: BKKH17008332S1

#### 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 |     |     | <u>LOD</u> | LOQ   | Limit mg/kg |
|--------------------|-----|-----|--------|-----|-----|------------|-------|-------------|
|                    |     |     | mg/kg  |     |     | mg/kg      | mg/kg |             |
|                    | (1) | (2) | (3)    | (4) | (5) |            |       |             |
| Sol. Barium (Ba)   | <4  | <4  | ND     | <4  | ND  | 1          | 5     | 1000        |
| Sol. Lead (Pb)     | ND  | ND  | ND     | ND  | ND  | 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 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) = | BLUE COATING ON WOOD       | Refer | BKKH16015744 |
|-------|----------------------------|-------|--------------|
| (2) = | DARK GREEN COATING ON WOOD | Refer | BKKH16015744 |
| (3) = | Green Coating On Wood      | Refer | BKKH16016212 |
| (4) = | Black Coating On Wood      | Refer | BKKH16016482 |
| (5) = | WHITE COATING ON WOOD      | Refer | BKKH17008950 |

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





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Number: BKKH17008332S1

#### 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.

|                    |     |     | Result |     | LOI  | <u> LOQ</u> | Limit mg/kg |
|--------------------|-----|-----|--------|-----|------|-------------|-------------|
|                    |     |     | mg/kg  |     | mg/l | kg mg/kg    |             |
|                    | (6) | (7) | (8)    | (9) |      |             |             |
| Sol. Barium (Ba)   | ND  | ND  | <5     | ND  | 1    | 5           | 1000        |
| , ,                |     |     | _      |     | _    | _           |             |
| Sol. Lead (Pb)     | ND  | ND  | <5     | <5  | 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:

| (6) = | YELLOW COATING ON WOOD      | Refer | BKKH17008950 |
|-------|-----------------------------|-------|--------------|
| (7) = | LACQUER COATING ON WOOD     | Refer | BKKH17008950 |
| (8) = | ORANGE COATING ON WOOD      | Refer | BKKH17008950 |
| (9) = | BLUE COATING ON WOOD (8950) | Refer | BKKH17008950 |

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



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Number: BKKH17008332S1

#### 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 $^{\blacktriangle}$ , acid extraction method was used and heavy elements migration content were determined by ICP-OES analysis.

|                    |      |      | Result<br>mg/kg | LOD<br>mg/kg | LOQ<br>mg/kg | Limit mg/kg |
|--------------------|------|------|-----------------|--------------|--------------|-------------|
|                    | (10) | (11) | (12)            |              |              |             |
| Sol. Barium (Ba)   | ND   | ND   | ND              | 1            | 5            | 1000        |
| Sol. Lead (Pb)     | ND   | ND   | ND              | 1            | 5            | 90          |
| Sol. Cadmium (Cd)  | ND   | ND   | ND              | 1            | 5            | 75          |
| Sol. Antimony (Sb) | ND   | ND   | ND              | 2            | 5            | 60          |
| Sol. Selenium (Se) | ND   | ND   | ND              | 1            | 5            | 500         |
| Sol. Chromium (Cr) | ND   | ND   | ND              | 2            | 5            | 60          |
| Sol. Mercury (Hg)  | ND   | ND   | ND              | 1            | 5            | 60          |
| Sol. Arsenic (As)  | 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:

| (10) = | Solid Wood          | Refer | BKKH17000142 |
|--------|---------------------|-------|--------------|
| (11) = | SAWDUST WOOD        | Refer | BKKH17008452 |
| (12) = | WHITE PLASTIC JOINT | Refer | BKKH17008825 |

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





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Number: BKKH17008332S1

#### 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

| Tested Component | Result | LOD     | LOQ     | <u>Limit</u>   |
|------------------|--------|---------|---------|----------------|
| rested component | mg/kg  | (mg/kg) | (mg/kg) | <u>(mg/kg)</u> |
| (1)              | ND     | 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             |
| (7)              | ND     | 2       | 13      | 90             |
| (8)              | ND     | 2       | 13      | 90             |
| (9)              | ND     | 2       | 13      | 90             |

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) = | BLUE COATING ON WOOD        | Refer | BKKH16015744 |
|-------|-----------------------------|-------|--------------|
| (2) = | DARK GREEN COATING ON WOOD  | Refer | BKKH16015744 |
| (3) = | Green Coating On Wood       | Refer | BKKH16016212 |
| (4) = | Black Coating On Wood       | Refer | BKKH16016482 |
| (5) = | WHITE COATING ON WOOD       | Refer | BKKH17008950 |
| (6) = | YELLOW COATING ON WOOD      | Refer | BKKH17008950 |
| (7) = | LACQUER COATING ON WOOD     | Refer | BKKH17008950 |
| (8) = | ORANGE COATING ON WOOD      | Refer | BKKH17008950 |
| (9) = | BLUE COATING ON WOOD (8950) | Refer | BKKH17008950 |

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The results relate only to the item tested.



Number: BKKH17008332S1

#### 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> |
|------------------|---------------|-----------------------|--------------|
| rested component | mg/kg         | (mg/kg) (mg/kg)       | (mg/kg)      |
| (10)             | ND            | 1 13                  | 100          |
| (11)             | <13           | 1 13                  | 100          |
| (12)             | 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:

| (10) = | Solid Wood          | Refer | BKKH17000142 |
|--------|---------------------|-------|--------------|
| (11) = | SAWDUST WOOD        | Refer | BKKH17008452 |
| (12) = | WHITE PLASTIC JOINT | Refer | BKKH17008825 |



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Number: BKKH17008332S1

#### Test conducted:

#### Total Lead (Pb) content 4

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 %  | LOQ %  | <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)              | ND       | 0.0002 | 0.0013 | 0.009          |
| (6)              | ND       | 0.0002 | 0.0013 | 0.009          |
| (7)              | ND       | 0.0002 | 0.0013 | 0.009          |
| (8)              | ND       | 0.0002 | 0.0013 | 0.009          |
| (9)              | ND       | 0.0002 | 0.0013 | 0.009          |

percentage Less than Remark: % =

> 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) = | BLUE COATING ON WOOD        | Refer BKKH16015744 |
|-------|-----------------------------|--------------------|
| (2) = | DARK GREEN COATING ON WOOD  | Refer BKKH16015744 |
| (3) = | Green Coating On Wood       | Refer BKKH16016212 |
| (4) = | Black Coating On Wood       | Refer BKKH16016482 |
| (5) = | WHITE COATING ON WOOD       | Refer BKKH17008950 |
| (6) = | YELLOW COATING ON WOOD      | Refer BKKH17008950 |
| (7) = | LACQUER COATING ON WOOD     | Refer BKKH17008950 |
| (8) = | ORANGE COATING ON WOOD      | Refer BKKH17008950 |
| (9) = | BLUE COATING ON WOOD (8950) | Refer BKKH17008950 |



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Number: BKKH17008332S1

#### 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> | LOD   | 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)              | ND            | 2     | 13    | 90                 |
| (6)              | ND            | 2     | 13    | 90                 |
| (7)              | ND            | 2     | 13    | 90                 |
| (8)              | ND            | 2     | 13    | 90                 |
| (9)              | ND            | 2     | 13    | 90                 |

| Remark:    | mg/kg =   | Milligram per kilogram | based on weight of | f sample; = ppm = | Parts per million |
|------------|-----------|------------------------|--------------------|-------------------|-------------------|
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LOD = Limit of Detection LOQ = Limit of Quantitation

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

## Tested components:

| (1) =                   | BLUE COATING ON WOOD  | Refer                   | BKKH16015744                                 |
|-------------------------|---|-------------------------|--|
| (2) =                   | DARK GREEN COATING ON WOOD  | Refer                   | BKKH16015744                                 |
| (3) =                   | Green Coating On Wood   | Refer                   | BKKH16016212                                 |
| (4) =                   | Black Coating On Wood   | Refer                   | BKKH16016482                                 |
| (5) =                   | WHITE COATING ON WOOD   | Refer                   | BKKH17008950                                 |
| (6) =                   | YELLOW COATING ON WOOD  | Refer                   | BKKH17008950                                 |
| (7) =                   | LACQUER COATING ON WOOD   | Refer                   | BKKH17008950                                 |
| (8) =                   | ORANGE COATING ON WOOD  | Refer                   | BKKH17008950                                 |
| (9) =                   | BLUE COATING ON WOOD (8950)   | Refer                   | BKKH17008950                                 |
| (6) =<br>(7) =<br>(8) = | YELLOW COATING ON WOOD LACQUER COATING ON WOOD ORANGE COATING ON WOOD | Refer<br>Refer<br>Refer | BKKH17008950<br>BKKH17008950<br>BKKH17008950 |





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Number: BKKH17008332S1

#### Test conducted:

6 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> | Limit mg/kg |
|------------------|---------------|------------|------------|-------------|
|                  | mg/kg         | mg/kg      | mg/kg      |             |
| (1)              | ND            | 1          | 13         | 100         |
| (2)              | <13           | 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:

| (1) = | Solid Wood          | Refer | BKKH17000142 |
|-------|---------------------|-------|--------------|
| (2) = | SAWDUST WOOD        | Refer | BKKH17008452 |
| (3) = | WHITE PLASTIC JOINT | Refer | BKKH17008825 |



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The results relate only to the item tested.



Number: BKKH17008332S1

#### 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   | 0.003    | 0.1      | 0.1      |
| Diethyl hexyl Phthalate (DEHP)   | ND  | ND  | ND       | ND  | ND  | 0.0015   | 0.003    | 0.1      | 0.1      |
| Benzyl butyl Phthalate (BBP)     | ND  | ND  | ND       | ND  | ND  | 0.0015   | 0.003    | 0.1      | 0.1      |
| Di-iso-nonyl Phthalate (DINP)    | ND  | ND  | ND       | ND  | ND  | 0.0015   | 0.009    | 0.1      | 0.1      |
| Di-n-octyl Phthalate (DNOP)      | ND  | ND  | ND       | ND  | ND  | 0.0015   | 0.003    | 0.1      |          |
| Di-iso-decyl Phthalate (DIDP)    | ND  | ND  | ND       | ND  | ND  | 0.0015   | 0.009    | 0.1      |          |
| Di-isobutyl phthalate (DIBP) ▲   | ND  | ND  | ND       | ND  | ND  | 0.0015   | 0.009    |          | 0.1      |
| Di-n-pentyl phthalate (DnPP) ▲   | ND  | ND  | ND       | ND  | ND  | 0.0015   | 0.009    |          | 0.1      |
| Di-n-hexyl phthalate (DnHP) ▲    | ND  | ND  | ND       | ND  | ND  | 0.0015   | 0.009    |          | 0.1      |
| Di-cyclohexyl phthalate (DCHP) ▲ | ND  | ND  | ND       | ND  | ND  | 0.0015   | 0.009    |          | 0.1      |
| Diisooctyl phthalate (DIOP) ▲    | ND  | ND  | ND       | ND  | ND  | 0.0015   | 0.009    |          |          |

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) = | BLUE COATING ON WOOD       | Refer | BKKH16015744 |
|-------|----------------------------|-------|--------------|
| (2) = | DARK GREEN COATING ON WOOD | Refer | BKKH16015744 |
| (3) = | Green Coating On Wood      | Refer | BKKH16016212 |
| (4) = | Black Coating On Wood      | Refer | BKKH16016482 |
| (5) = | SAWDUST WOOD               | Refer | BKKH17008452 |

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Number: BKKH17008332S1

#### 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) |     |      | (%, w/w) | (%, w/w) | (%, w/w) | (%, w/w) |
|                                  | (6) | (7) | (8)      | (9) | (10) |          |          |          |          |
| Dibutyl Phthalate (DBP)          | ND  | ND  | ND       | ND  | ND   | 0.0015   | 0.003    | 0.1      | 0.1      |
| Diethyl hexyl Phthalate (DEHP)   | ND  | ND  | ND       | ND  | ND   | 0.0015   | 0.003    | 0.1      | 0.1      |
| Benzyl butyl Phthalate (BBP)     | ND  | ND  | ND       | ND  | ND   | 0.0015   | 0.003    | 0.1      | 0.1      |
| Di-iso-nonyl Phthalate (DINP)    | ND  | ND  | ND       | ND  | ND   | 0.0015   | 0.009    | 0.1      | 0.1      |
| Di-n-octyl Phthalate (DNOP)      | ND  | ND  | ND       | ND  | ND   | 0.0015   | 0.003    | 0.1      |          |
| Di-iso-decyl Phthalate (DIDP)    | ND  | ND  | ND       | ND  | ND   | 0.0015   | 0.009    | 0.1      |          |
| Di-isobutyl phthalate (DIBP) ▲   | ND  | ND  | ND       | ND  | ND   | 0.0015   | 0.009    |          | 0.1      |
| Di-n-pentyl phthalate (DnPP) ▲   | ND  | ND  | ND       | ND  | ND   | 0.0015   | 0.009    |          | 0.1      |
| Di-n-hexyl phthalate (DnHP) ▲    | ND  | ND  | ND       | ND  | ND   | 0.0015   | 0.009    |          | 0.1      |
| Di-cyclohexyl phthalate (DCHP) ▲ | ND  | ND  | ND       | ND  | ND   | 0.0015   | 0.009    |          | 0.1      |
| Diisooctyl phthalate (DIOP) ▲    | ND  | ND  | ND       | ND  | ND   | 0.0015   | 0.009    |          |          |

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) =  | WHITE COATING ON WOOD       | Refer | BKKH17008950 |
|--------|-----------------------------|-------|--------------|
| (7) =  | YELLOW COATING ON WOOD      | Refer | BKKH17008950 |
| (8) =  | LACQUER COATING ON WOOD     | Refer | BKKH17008950 |
| (9) =  | ORANGE COATING ON WOOD      | Refer | BKKH17008950 |
| (10) = | BLUE COATING ON WOOD (8950) | Refer | BKKH17008950 |

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Number: BKKH17008332S1

#### 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) |
|                                  | (11) |          |                 |          |          |          |
| Dibutyl Phthalate (DBP)          | ND   |          | 0.0015          | 0.003    | 0.1      | 0.1      |
| Diethyl hexyl Phthalate (DEHP)   | ND   |          | 0.0015          | 0.003    | 0.1      | 0.1      |
| Benzyl butyl Phthalate (BBP)     | ND   |          | 0.0015          | 0.003    | 0.1      | 0.1      |
| Di-iso-nonyl Phthalate (DINP)    | ND   |          | 0.0015          | 0.009    | 0.1      | 0.1      |
| Di-n-octyl Phthalate (DNOP)      | ND   |          | 0.0015          | 0.003    | 0.1      |          |
| Di-iso-decyl Phthalate (DIDP)    | ND   |          | 0.0015          | 0.009    | 0.1      |          |
| Di-isobutyl phthalate (DIBP) ▲   | ND   |          | 0.0015          | 0.009    |          | 0.1      |
| Di-n-pentyl phthalate (DnPP) ▲   | ND   |          | 0.0015          | 0.009    |          | 0.1      |
| Di-n-hexyl phthalate (DnHP) ▲    | ND   |          | 0.0015          | 0.009    |          | 0.1      |
| Di-cyclohexyl phthalate (DCHP) ▲ | ND   |          | 0.0015          | 0.009    |          | 0.1      |
| Diisooctyl phthalate (DIOP) ▲    | ND   |          | 0.0015          | 0.009    |          |          |

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:

(11) = WHITE PLASTIC JOINT Refer BKKH17008825

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The results relate only to the item tested.



Number: BKKH17008332S1

#### 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   | 0.003           | 0.1      |
| Diethyl hexyl Phthalate (DEHP) | ND  | ND  | ND       | ND  | ND  | 0.0015   | 0.003           | 0.1      |
| Benzyl butyl Phthalate (BBP)   | ND  | ND  | ND       | ND  | ND  | 0.0015   | 0.003           | 0.1      |
| Di-iso-nonyl Phthalate (DINP)  | ND  | ND  | ND       | ND  | ND  | 0.0015   | 0.009           | 0.1      |
| Dioctyl Phthalate (DNOP)       | ND  | ND  | ND       | ND  | ND  | 0.0015   | 0.003           | 0.1      |
| Di-iso-decyl Phthalate (DIDP)  | ND  | ND  | ND       | ND  | ND  | 0.0015   | 0.009           | 0.1      |
| Di-n-hexyl Phthalate (DnHP)    | ND  | ND  | ND       | ND  | ND  | 0.0015   | 0.003           | 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) = | BLUE COATING ON WOOD       | Refer | BKKH16015744 |
|-------|----------------------------|-------|--------------|
| (2) = | DARK GREEN COATING ON WOOD | Refer | BKKH16015744 |
| (3) = | Green Coating On Wood      | Refer | BKKH16016212 |
| (4) = | Black Coating On Wood      | Refer | BKKH16016482 |
| (5) = | SAWDUST WOOD               | Refer | BKKH17008452 |





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Number: BKKH17008332S1

#### Test conducted:

# Phthalate content test

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

|                                |     |     | Result   |     |      | LOD             | LOQ      | Limit |
|--------------------------------|-----|-----|----------|-----|------|-----------------|----------|-------|
|                                |     |     | (%, w/w) |     |      | <u>(%, w/w)</u> | (%, w/w) |       |
|                                | (6) | (7) | (8)      | (9) | (10) |                 |          |       |
| Dibutyl Phthalate (DBP)        | ND  | ND  | ND       | ND  | ND   | 0.0015          | 0.003    | 0.1   |
| Diethyl hexyl Phthalate (DEHP) | ND  | ND  | ND       | ND  | ND   | 0.0015          | 0.003    | 0.1   |
| Benzyl butyl Phthalate (BBP)   | ND  | ND  | ND       | ND  | ND   | 0.0015          | 0.003    | 0.1   |
| Di-iso-nonyl Phthalate (DINP)  | ND  | ND  | ND       | ND  | ND   | 0.0015          | 0.009    | 0.1   |
| Dioctyl Phthalate (DNOP)       | ND  | ND  | ND       | ND  | ND   | 0.0015          | 0.003    | 0.1   |
| Di-iso-decyl Phthalate (DIDP)  | ND  | ND  | ND       | ND  | ND   | 0.0015          | 0.009    | 0.1   |
| Di-n-hexyl Phthalate (DnHP)    | ND  | ND  | ND       | ND  | ND   | 0.0015          | 0.003    | 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) =  | WHITE COATING ON WOOD       | Refer | BKKH17008950 |
|--------|-----------------------------|-------|--------------|
| (7) =  | YELLOW COATING ON WOOD      | Refer | BKKH17008950 |
| (8) =  | LACQUER COATING ON WOOD     | Refer | BKKH17008950 |
| (9) =  | ORANGE COATING ON WOOD      | Refer | BKKH17008950 |
| (10) = | BLUE COATING ON WOOD (8950) | Refer | BKKH17008950 |





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Number: BKKH17008332S1

#### Test conducted:

# Phthalate content test

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

|                                |      | Result   | LOD             | LOQ             | Limit    |
|--------------------------------|------|----------|-----------------|-----------------|----------|
|                                |      | (%, w/w) | <u>(%, w/w)</u> | <u>(%, w/w)</u> | (%, w/w) |
|                                | (11) |          |                 |                 |          |
| Dibutyl Phthalate (DBP)        | ND   |          | 0.0015          | 0.003           | 0.1      |
| Diethyl hexyl Phthalate (DEHP) | ND   |          | 0.0015          | 0.003           | 0.1      |
| Benzyl butyl Phthalate (BBP)   | ND   |          | 0.0015          | 0.003           | 0.1      |
| Di-iso-nonyl Phthalate (DINP)  | ND   |          | 0.0015          | 0.009           | 0.1      |
| Dioctyl Phthalate (DNOP)       | ND   |          | 0.0015          | 0.003           | 0.1      |
| Di-iso-decyl Phthalate (DIDP)  | ND   |          | 0.0015          | 0.009           | 0.1      |
| Di-n-hexyl Phthalate (DnHP)    | ND   |          | 0.0015          | 0.003           | 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:

(11) = WHITE PLASTIC JOINT Refer BKKH17008825





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Number: BKKH17008332S1

#### 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.

# Surface coating material

| Tested component | <u>Result</u> | <u>LOD</u> | <u>LOQ</u> | <u>Limit</u> |
|------------------|---------------|------------|------------|--------------|
|                  | mg/kg         | mg/kg n    | ng/kg      | mg/kg        |
| (1)              | ND            | 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           |
| (7)              | ND            | 2          | 13         | 90           |
| (8)              | ND            | 2          | 13         | 90           |
| (9)              | ND            | 2          | 13         | 90           |

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)

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) | = | BLUE COATING ON WOOD        | Refer | BKKH16015744 |
|-----|---|-----------------------------|-------|--------------|
| (2) | = | DARK GREEN COATING ON WOOD  | Refer | BKKH16015744 |
| (3) | = | Green Coating On Wood       | Refer | BKKH16016212 |
| (4) | = | Black Coating On Wood       | Refer | BKKH16016482 |
| (5) | = | WHITE COATING ON WOOD       | Refer | BKKH17008950 |
| (6) | = | YELLOW COATING ON WOOD      | Refer | BKKH17008950 |
| (7) | = | LACQUER COATING ON WOOD     | Refer | BKKH17008950 |
| (8) | = | ORANGE COATING ON WOOD      | Refer | BKKH17008950 |
| (9) | = | BLUE COATING ON WOOD (8950) | Refer | BKKH17008950 |

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Number: BKKH17008332S1

#### Test conducted:

#### II Non-surface coating material (substrate)

| Tested component | <u>Result</u> | <u>LOD</u> <u>LOQ</u> | <u>Limit</u> |
|------------------|---------------|-----------------------|--------------|
|                  | mg/kg         | mg/kg mg/kg           | g mg/kg      |
| (10)             | ND            | 1 13                  | 100          |
| (11)             | <13           | 1 13                  | 100          |
| (12)             | 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:

| (10) = | Solid Wood          | Refer | BKKH17000142 |
|--------|---------------------|-------|--------------|
| (11) = | SAWDUST WOOD        | Refer | BKKH17008452 |
| (12) = | WHITE PLASTIC JOINT | Refer | BKKH17008825 |

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

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