



CERT. NO. ACT-1399

## Test Report

No.: DPI130400824CP

Date: Apr 29, 2013

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Applicant : GMG PUBLISHING CORP. GALISON BOOKS  
28 West 44th Street Suite 1411-12, New York, NY10036

Application No. : DIR159696

Sample Description : Submitted sample(s) said to be:\*

Labeled Age Grading : Ages 2+

Requested Age Grading : Over 2 Years

Age Grading Assessed As Per Age Guideline : Over 2 Years

Age Grading Applied In Testing : Over 2 Years

Buyer : G050- GMG PUBLISHING CORP. GALISON BOOKS

Country Of Destination : Global

Sample Received Date : Apr 17, 2013

2<sup>nd</sup> Submission Date : Apr 24, 2013

Test Period : Apr 17, 2013 TO Apr 29, 2013

\*\*\*\*\*For Further Details, Please Refer to the Following Page(s)\*\*\*\*\*

SIGN FOR AND ON BEHALF OF  
DPI LABORATORY

FANNY LAU  
LABORATORY MANAGER

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DPI Laboratory (Dongguan) Limited \* DPI Laboratory Services Limited  
Unit F 3/F Dongshan Industrial district, Aubuiwei, Zhangmutou, Dongguan, China

Tel : (86-769)87712112-1702 Fax : (86-769)87712480 Postcode : 523619

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TEST REQUEST	RESULT
A) PHYSICAL AND MECHANICAL, ASTM F963-11-PRODUCT SET.	PASS
B) FLAMMABILITY TEST OF MATERIALS, ASTM-F963-11-PRODUCT SET.	PASS
C) TO DETERMINE TOTAL LEAD AND SOLUBLE ELEMENT CONTENTS IN THE SUBMITTED SAMPLE (S) IN ACCORDANCE WITH THE AMERICAN SOCIETY FOR TESTING AND MATERIALS-ASTM F963-11.	PASS
D) US CONSUMER PRODUCT SAFETY IMPROVEMENT ACT 2008(H.R.4040) TITLE I, SEC 108 & AMENDMENT H.R.2715 REQUIREMENT ON PHTHALATES.	PASS
E) TO DETERMINE DI-N-HEXYL PHTHALATE (DNHP) CONTENT IN THE SUBMITTED SAMPLES ACCORDING TO US CALIFORNIA PROPOSITION 65.	PASS
F) U.S. CONSUMER PRODUCT SAFETY IMPROVEMENT ACT 2008 (H.R.4040), TITLE 1, SECTION 101 & AMENDMENT H.R.2715 REQUIREMENT FOR TOTAL LEAD CONTENT IN SUBSTRATE.	PASS
G) U.S. CONSUMER PRODUCT SAFETY IMPROVEMENT ACT 2008 (H.R.4040), TITLE 1, SECTION 101 FOR TOTAL LEAD CONTENT IN SURFACE COATING.	PASS
H) EN 71-1:2011 FOR MECHANICAL AND PHYSICAL PROPERTIES.	PASS
I) EN 71-2: 2011 FLAMMABILITY OF TOYS.	PASS
J) CADMIUM CONTENT REQUIREMENT IN ANNEX XVII ITEMS 23 OF REACH REGULATION (EC) NO. 1907/2006 & AMENDMENT NO. 552/2009 (FORMERLY KNOWN AS DIRECTIVE 91/338/EEC).	PASS
K) PHTHALATES CONTENT REQUIREMENT IN ANNEX XVII ITEMS 51 & 52 OF REACH REGULATION (EC) NO. 1907/2006 & AMENDMENT NO. 552/2009 (FORMERLY KNOWN AS DIRECTIVE 2005/84/EC).	PASS
L) THE TEST RESULT OF SUBMITTED SAMPLE CAN COMPLY WITH DIRECTIVE 2009/48/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL OF 18 JUNE 2009 ON THE SAFETY OF TOYS PARTICULAR SAFETY REQUIREMENTS ARE CONCERNED IN ANNEX II PART III CHEMICAL PROPERTIES CLAUSE 13 MIGRATION LIMITS.	PASS
M) BASED ON THE PERFORMED TESTS ON SUBMITTED SAMPLE (S), ORGANOSTANNIC COMPOUNDS CONTENT ACCORDING TO REACH REGULATION(EC) No. 1907/2006 ANNEX XVII ITEM 20 AND AMENDMENT COMMISSION REGULATION(EU) No. 276/2010(FORMERLY KNOWN AS 2009/425/EC).	PASS
N) EUROPEAN REGULATION (EC) NO.1907/2006 (REACH) ANNEX XVII AND ITS AMENDMENTS – AZOCOLLOURANTS (PREVIOUSLY RESTRICTED UNDER DIRECTIVE 2004/21/EC).	PASS

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### A) AS PER ASTM F963-11 STANDARD CONSUMER SAFETY SPECIFICATION FOR TOY SAFETY

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
IMPACT	SECTION 1500.52 (b)	4 DROPS × 3.0 FT
TORQUE	SECTION 1500.53(e)	4 IN-LBF, 10 SEC
TENSION	SECTION 1500.52(f)	15 LBF, 10 SEC

<u>CLAUSE</u>	<u>DESCRIPTION</u>	<u>RESULT</u>
<b>4</b>	<b>SAFETY REQUIREMENTS</b>	
4.1	MATERIAL QUALITY	P
4.2	FLAMMABILITY	P (SEE PART B)
4.4	ELECTRICAL/THERMAL ENERGY	NA
4.5	SOUND-PRODUCING TOYS	NA
4.6	SMALL OBJECTS	P
4.6.1	TOYS THAT ARE INTENDED FOR CHILDREN UNDER 36 MONTHS OF AGE	P
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

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4.20	PACIFIERS	NA
4.21	PROJECTILES TOYS	NA
4.22	TEETHERS AND TEETHING TOYS	NA
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 MARKINGS	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	YO YO ELASTIC TETHER TOYS	NA
4.38	MAGNETS	NA
4.39	JAW ENTRAPMENT IN HANDLES AND STEERING WHEELS	NA
<b>5.</b>	<b>SAFETY LABELING REQUIREMENTS</b>	
5.1	FEDERAL GOVERNMENT REQUIREMENTS	NA
5.2	AGE GRADING LABELING	P
5.3	SAFETY LABELING REQUIREMENTS	NA
5.4	AQUATIC TOYS	NA
5.5	CRIB AND PLAYPEN TOYS	NA
5.6	MOBILES	NA

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5.7	STROLLER AND CARRIAGE TOYS	NA
5.8	TOYS INTENDED TO BE ASSEMBLED BY AN ADULT	NA
5.9	SIMULATED PROTECTIVE DEVICES	NA
5.10	TOYS WITH FUNCTIONAL SHARP EDGES AND SHARP POINTS	NA
5.11	SMALL OBJECTS, SMALL BALLS, MARBLES, AND BALLOONS	NA
5.12	TOY CAPS	NA
5.13	ART MATERIALS	NA
5.14	ELECTRIC TOYS	NA
5.15	BATTERY-OPERATED TOYS	NA
5.16	PROMOTIONAL MATERIALS	P
5.17	MAGNETS	NA
<b>6</b>	<b>INSTRUCTIONAL LITERATURE</b>	
6.1	DEFINITION AND DESCRIPTION	P
6.2	CRIB AND PLAYPEN TOYS	NA
6.3	MOBILES	NA
6.4	TOYS INTENDED TO BE ASSEMBLED BY AN ADULT	NA
6.5	BATTERY-OPERATED TOYS	NA
6.6	TOYS IN CONTACT WITH FOOD	NA
<b>7</b>	<b>PRODUCER'S MARKINGS</b>	
7.1	PRODUCER'S MARKINGS	P
7.2	BATTERY-POWERED RIDE-ON TOYS	NA

REMARK 1: THE SUBMITTED SAMPLES WERE UNDERGONE THE TESTS IN ACCORDANCE WITH SECTION 8.5, 8.6, 8.7, 8.8, 8.9, 8.10, 8.12, 8.21, 8.22, 8.24 ON NORMAL USE, ABUSE AND SPECIFIC TESTS FOR DIFFERENT TYPES OF TOYS WHICHEVER IS APPLICABLE.

REMARK 2: P = PASS, NA = NOT APPLICABLE.

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## B) AS PER SECTION 4.2 OF ASTM F963-11 STANDARD CONSUMER SAFETY SPECIFICATION FOR TOY SAFETY

### FLAMMABILITY TEST FOR SOLIDS AND SOFT TOYS (CLAUSE 4.2, ANNEX A5)

<u>SAMPLE</u>	<u>BURNING RATE (INCH/SEC.)</u>	<u>LIMIT (INCH/SEC.)</u>
PUZZLES	DNI	0.1

REMARK 1: DNI = DID NOT IGNITE

THE SUBMITTED TOY SAMPLE AND ITS ACCESSORIES WERE TESTED, THE ABOVE RESULT ONLY SHOWED THE MOST SEVERE BURN RATE OF THE SAMPLES.

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### C) ASTM F963-11 – Heavy Metal Analysis

#### I) Paint and Similar Surface-Coating Materials

Total Method: With reference to CPSC-CH-E1003-09.1 - Standard Operating Procedure for Determining Heavy Metal in Paint and Other Similar Surface Coatings

Soluble Method: With reference to ASTM F963-11 Clause 8.3

Analysis was performed by Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES)

Test Result: (Unit: ppm)

#### Total Content:

Test Item(s)	1	Total Limit (ppm)	Soluble Limit (ppm)	MDL(ppm)
Total Lead (Pb)	ND	90	90	<2
Total Mercury (Hg)	ND	--	60	<2
Total Chromium (Cr)	ND	--	60	<2
Total Cadmium (Cd)	ND	--	75	<2
Total Antimony (Sb)	ND	--	60	<5
Total Arsenic (As)	ND	--	25	<5
Total Barium (Ba)	ND	--	1000	<5
Total Selenium (Se)	ND	--	500	<5

#### Specimen Description:

1. Multi-color coating on paper board (box & puzzle)

Remark: The sample(s) was (were) analyzed on behalf of the applicant as mixing sample in one testing.

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### Soluble Content:

Test Item(s)	1	2	Limit (ppm)	MDL(ppm)
Soluble Mercury (Hg)	ND	ND	60	<2
Soluble Lead (Pb)	ND	ND	100	<5
Soluble Chromium (Cr)	ND	ND	60	<5
Soluble Cadmium (Cd)	ND	ND	75	<5
Soluble Antimony (Sb)	ND	ND	60	<2
Soluble Arsenic (As)	ND	ND	25	<2
Soluble Barium (Ba)	ND	ND	1000	<5
Soluble Selenium (Se)	ND	ND	500	<5

### Specimen Description:

1. Multi-color coating on paper board (box)
2. Multi-color coating on paper board (puzzle)

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### II) Toy Substrate Materials

Total Method (non-metallic materials): With reference to CPSC-CH-E1002-08.2 - Standard Operation Procedure for Determining Total Lead (Pb) in Non-Metal Children Product

Soluble Method: With reference to ASTM F963-11 Clause 8.3

Analysis was performed by Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES).

Test Result: (Unit: ppm)

#### Total Content:

Test Item(s)	1	2	Total Limit (ppm)	Soluble Limit (ppm)	MDL(ppm)
Total Lead (Pb)	ND	13.4	100	90	<2
Total Mercury (Hg)	ND	ND	--	60	<2
Total Chromium (Cr)	ND	ND	--	60	<2
Total Cadmium (Cd)	ND	ND	--	75	<2
Total Antimony (Sb)	ND	ND	--	60	<5
Total Arsenic (As)	ND	ND	--	25	<5
Total Barium (Ba)	ND	60.3	--	1000	<5
Total Selenium (Se)	ND	ND	--	500	<5

#### Specimen Description:

1. Transparent adhesive plastic tape (end of cord)
2. White surfaced gray paper board excluded coating (puzzle & box) & Brown corrugated paper w/glue (box)

Remark: The sample(s) was (were) analyzed on behalf of the applicant as mixing sample in one testing.

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### Soluble Content:

Test Item(s)	1	2	3	4	5	6	Limit (ppm)	MDL(ppm)
Soluble Mercury (Hg)	ND	ND	ND	ND	ND	ND	60	<2
Soluble Lead (Pb)	ND	ND	ND	ND	ND	ND	100	<5
Soluble Chromium (Cr)	ND	ND	ND	ND	ND	ND	60	<5
Soluble Cadmium (Cd)	ND	ND	ND	ND	ND	ND	75	<5
Soluble Antimony (Sb)	ND	ND	ND	ND	ND	ND	60	<2
Soluble Arsenic (As)	ND	ND	ND	ND	ND	ND	25	<2
Soluble Barium (Ba)	ND	8.0	12.0	13.2	ND	ND	1000	<5
Soluble Selenium (Se)	ND	ND	ND	ND	ND	ND	500	<5

Test Item(s)	7	8	9	10	11	12	13	Limit (ppm)	MDL(ppm)
Soluble Mercury (Hg)	ND	ND	ND	ND	ND	ND	ND	60	<2
Soluble Lead (Pb)	ND	ND	ND	ND	ND	ND	ND	100	<5
Soluble Chromium (Cr)	ND	ND	ND	ND	ND	ND	ND	60	<5
Soluble Cadmium (Cd)	ND	ND	ND	ND	ND	ND	ND	75	<5
Soluble Antimony (Sb)	ND	ND	ND	ND	ND	ND	ND	60	<2
Soluble Arsenic (As)	ND	ND	ND	ND	ND	ND	ND	25	<2
Soluble Barium (Ba)	ND	ND	ND	ND	ND	ND	ND	1000	<5
Soluble Selenium (Se)	ND	ND	ND	ND	ND	ND	ND	500	<5

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### Specimen Description:

1. Transparent adhesive plastic tape (end of cord)
2. White surfaced gray paper board excluded coating (box)
3. White surfaced gray paper board excluded coating (puzzle)
4. Brown corrugated paper w/glue (box)
5. Purple cord (box)
6. Green cord (box)
7. Orange cord (box)
8. Pink cord (box)
9. Yellow cord (box)
10. Red cord (box)
11. Blue cord (box)
12. Cream cord (box)
13. Vivid orange cord (box)

Note: 1. ppm =mg/kg

2. MDL = Method Detection Limit
3. ND = Not Detected (lower than MDL)
4. Results of soluble elements shown are of the adjusted analytical results.
5. "--" = Not Regulated

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### D) PHTHALATE CONTENT TEST

As per Standard Operating Procedure for Determining Phthalates, test method CPSC-CH-C1001-09.3 was used and phthalate content was determined by Gas Chromatography / Mass Spectrometry (GC-MS).

Test Result: (Unit: %, w/w)

Toys and childcare articles:

Test Item(s)	1	2	Permissible Limit (% w/w)
Dibutyl Phthalate (DBP)	ND	ND	0.1%
Benzylbutyl Phthalate (BBP)	ND	ND	0.1%
Di-(2-ethylhexyl)Phthalate(DEHP)	ND	ND	0.1%

Toys that can be placed in the mouth and childcare articles:

Test Item(s)	1	2	Permissible Limit (% w/w)
Diisononyl Phthalate (DINP)	ND	ND	0.1%
Di-n-octyl Phthalate (DNOP)	ND	ND	0.1%
Diisodecyl Phthalate (DIDP)	ND	ND	0.1%

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.

Specimen Description:

1. Multi-color coating on paper board (box & puzzle)
2. Transparent adhesive plastic tape (end of cord)

Note: 1. 0.1% = 1000ppm

2. ND. = Not Detected

3. Method Detection Limit (MDL) for DBP BBP, DEHP, DNOP, DINP and DIDP =0.01% respectively.

4. % = percentage by weight

5. The sample(s) was (were) analyzed on behalf of the applicant as mixing sample in one testing.

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### E) DI-N-HEXYL PHTHALATE (DNHP) CONTENT

Test Method: With reference to the test method CPSC-CH-C1001-09.3 was used and phthalate content was determined by Gas Chromatography / Mass Spectrometry (GC-MS).

Test Result: (Unit: %, w/w)

Test Item(s)	1	2	Permissible Limit (% w/w)
Di-n-hexyl Phthalate (DNHP)	ND	ND	0.1%

Test Part Description:

1. Multi-color coating on paper board (box & puzzle)
2. Transparent adhesive plastic tape (end of cord)

Note: 1. ND = Not detected

2. Method Detection Limit (MDL) for DnHP =0.01%

3. The sample(s) was (were) analyzed on behalf of the applicant as mixing sample in one testing.

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### **F) Total Lead (Pb) Content in Non-Surface Coating Materials**

Method (non-metallic materials): With reference to CPSC-CH-E1002-08.2- Standard Operation Procedure for Determining Total Lead (Pb) in Non-Metal Children Product.

Method (metal materials): With reference to CPSC-CH-E1001-08.2 - Standard Operating Procedure for Determining Total Lead (Pb) in Children's Metal Products (Including Children's Metal Jewelry).

Total lead content was determined by Atomic Absorption Spectrophotometry (AAS) and/or Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES).

Test Result: (Unit: ppm)

Test Item(s)	Total Lead (Pb)
Limits (ppm)	100
MDL(ppm)	2
Specimen Description	Result (ppm)
1. Transparent adhesive plastic tape (end of cord)	ND
2. White surfaced gray paper board excluded coating (puzzle & box) & Brown corrugated paper w/glue (box)	13.4
3. Gloden metal (gasket & eyelet)	ND

Note: 1. ppm = mg/kg

2. MDL = Method Detection Limit

3. The sample(s) was (were) analyzed on behalf of the applicant as mixing sample in one testing.

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### G) TOTAL LEAD CONTENT IN SURFACE COATING

Method: CPSC-CH-E1003-09.1 Standard Operation Procedure for Determining Total Lead (Pb) in Paint and Other Similar Surface Coatings.

Analysis was performed by Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES) and/or Atomic Absorption Spectrophotometry (AAS).

Test Result: (Unit: ppm)

Test Item(s)	Total Lead (Pb)
Limits (ppm)	90
MDL(ppm)	2
Specimen Description	Result (ppm)
1. Multi-color coating on paper board (box & puzzle)	ND

- Note:
1. ppm =mg/kg
  2. MDL = Method Detection Limit
  3. ND = Not Detected (lower than MDL)
  4. The sample(s) was (were) analyzed on behalf of the applicant as mixing sample in one testing.

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### H) AS PER EUROPEAN STANDARD ON SAFETY OF TOYS EN 71-1:2011 MECHANICAL AND PHYSICAL PROPERTIES

<u>CLAUSE</u>	<u>DESCRIPTION</u>	<u>RESULT</u>
4	GENERAL REQUIREMENTS	
4.1	MATERIALS CLEANLINESS	P
4.2	ASSEMBLY	NA
4.3	FLEXIBLE PLASTIC SHEETING	NA
4.4	TOY BAGS	NA
4.5	GLASS	NA
4.6	EXPANDING MATERIALS	NA
4.7	EDGES	P
4.8	POINTS AND METALLIC WIRES	P
4.9	PROTRUDING PARTS	NA
4.10	PARTS MOVING AGAINST EACH OTHER	NA
4.11	MOUTH-ACTUATED TOYS AND OTHER TOYS INTENDED TO BE PUT IN THE MOUTH	NA
4.12	BALLOONS	NA
4.13	CORDS OF TOY KITES AND OTHER FLYING TOYS	NA
4.14	ENCLOSURES	NA
4.15	TOYS INTENDED TO BEAR THE MASS OF A CHILD	NA
4.16	HEAVY IMMOBILE TOYS	NA
4.17	PROJECTILES	NA
4.18	AQUATIC TOYS AND INFLATBLE TOYS	NA
4.19	PERCUSSION CAPS SPECIFICALLY DESIGNED FOR USE IN TOYS AND TOYS USING PERCUSSION CAPS	NA

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4.20	ACOUSTICS	NA
4.21	TOYS CONTAINING A NON-ELECTRICAL HEAT SOURCE	NA
4.22	SMALL BALLS	NA
4.23	MAGNETS	NA
4.24	YO-YO BALLS	NA
4.25	TOYS ATTACHED TO FOOD	NA
5	TOYS INTENDED FOR CHILDREN UNDER 36 MONTHS	P
5.1	GENERAL REQUIREMENTS	P
5.2	SOFT-FILLED TOYS AND SOFT-FILLED PARTS OF A TOY	NA
5.3	PLASTIC SHEETING	NA
5.4	CORDS, CHAINS AND ELECTRICAL CABLES IN TOYS	NA
5.5	LIQUID-FILLED TOYS	NA
5.6	SPEED LIMITATION OF ELECTRICALLY-DRIVEN RIDE-ON TOYS	NA
5.7	GLASS AND PORCELAIN	NA
5.8	SHAPE AND SIZE OF CERTAIN TOYS	NA
5.9	TOYS COMPRISING MONOFILAMENT FIBRES	NA
5.10	SMALL BALLS	NA
5.11	PLAY FIGURES	NA
5.12	HEMISPHERIC-SHAPED TOYS	NA
5.13	SUCTION CUPS	NA
5.14	STRAPS INTENDED TO BE WORN FULLY OR PARTIALLY AROUND THE NECK	NA
6	PACKAGING	NA
7	WARNINGS, MARKINGS AND INSTRUCTIONS FOR USE	P#
7.1	GENERAL	NA

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7.2	TOYS NOT INTENDED FOR CHILDREN UNDER 36 MONTHS	NA
7.3	LATEX BALLOON	NA
7.4	AQUATIC TOYS	NA
7.5	FUNCTIONAL TOYS	NA
7.6	HAZARDOUS SHARP FUNCTIONAL EDGES AND POINTS	NA
7.7	PROJECTILES	NA
7.8	IMITATION PROTECTIVE MASKS AND HELMETS	NA
7.9	TOY KITES	NA
7.10	ROLLER SKATES, INLINE SKATES AND TOY SKATEBOARDS AND CERTAIN OTHER RIDE-ON TOYS	NA
7.11	TOYS INTENDED TO BE ATTACHED TO OR STRUNG ACROSS A CRADLE, COT, OR PERAMBULATOR	NA
7.12	LIQUID -FILLED TEETHERS	NA
7.13	PERCUSSION CAPS SPECIFICALLY DESIGNED FOR USE IN TOYS	NA
7.14	ACOUSTICS	NA
7.15	TOY BICYCLES	NA
7.16	TOYS INTENDED TO BEAR THE MASS OF A CHILD	NA
7.17	TOYS COMPRISING MONOFILAMENT FIBRES	NA
7.18	TOY SCOOTERS	NA
7.19	ROCKING HORSES AND SIMILAR TOYS	NA
7.20	MAGNETIC/ ELECTRICAL EXPERIMENTAL SET	NA
7.21	TOYS WITH ELECTRICAL CABLES EXCEEDING 300 MM IN LENGTH	NA
7.22	TOYS WITH CORDS OR CHAINS INTENDED FOR CHILDREN OF 18 MONTHS AND OVER BUT UNDER 36 MONTHS	NA

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REMARK 1: P = PASS      NA = NOT APPLICABLE

REMARK 2: # = COMMENTS ACCORDING TO 2009/48/EC, DIRECTIVE ON THE SAFETY OF TOYS:

- MANUFACTURER'S AND IMPORTER'S NAME, REGISTERED TRADE NAME OR REGISTERED TRADE MARK AND THE ADDRESS AT WHICH MANUFACTURER OR IMPORTER CAN BE CONTACTED MUST BE INDICATED ON THE TOY OR, WHERE THAT IS NOT POSSIBLE, ON ITS PACKAGING OR IN A DOCUMENT ACCOMPANYING THE TOY.
- MANUFACTURERS MUST ENSURE THAT THEIR TOYS BEAR A TYPE, BATCH, SERIAL OR MODEL NUMBER OR OTHER ELEMENT ALLOWING THEIR IDENTIFICATION, OR WHERE THE SIZE OR NATURE OF THE TOY DOES NOT ALLOW IT, THAT THE REQUIRED INFORMATION IS PROVIDED ON THE PACKAGING OR IN A DOCUMENT ACCOMPANYING THE TOY.
- MANUFACTURERS AND IMPORTERS MUST ENSURE THAT THE TOY IS ACCOMPANIED BY INSTRUCTIONS AND SAFETY INFORMATION IN A LANGUAGE OR LANGUAGES EASILY UNDERSTOOD BY CONSUMERS, AS DETERMINED BY THE MEMBER STATE CONCERNED.
- A MEMBER STATE MAY, WITHIN ITS TERRITORY, STIPULATE THAT WARNINGS AND SAFETY INSTRUCTIONS SHALL BE WRITTEN IN A LANGUAGE OR LANGUAGES EASILY UNDERSTOOD BY CONSUMERS, AS DETERMINED BY THAT MEMBER STATE.

\*\*\*\*\*

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DPI Laboratory (Dongguan) Limited \* DPI Laboratory Services Limited  
Unit F 3/F Dongshan Industrial district, Aubuiwei, Zhangmutou, Dongguan, China

Tel : (86-769)87712112-1702      Fax : (86-769)87712480      Postcode : 523619

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### I) AS PER EUROPEAN STANDARD ON SAFETY OF TOYS EN 71-2:2011 FLAMMABILITY OF TOYS

<u>CLAUSE</u>	<u>DESCRIPTION</u>	<u>RESULT</u>
4.1	GENERAL REQUIREMENTS	P
4.2	TOYS TO BE WORN ON THE HEAD	NA
4.3	TOY DISGUISE COSTUMES AND TOYS INTENDED TO BE WORN BY A CHILD IN PLAY	NA
4.4	TOYS INTENDED TO BE ENTERED BY A CHILD	NA
4.5	SOFT-FILLED TOYS	NA

REMARK 1: P = PASS      NA = NOT APPLICABLE

\*\*\*\*\*

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Unit F 3/F Dongshan Industrial district, Aubuiwei, Zhangmutou, Dongguan, China

Tel : (86-769)87712112-1702      Fax : (86-769)87712480      Postcode : 523619



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**J) Total Cadmium Content Test**

With reference to EN 1122:2001.

Analysis was performed by Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES) and/or Atomic Absorption Spectrophotometry (AAS).

Test Item(s)	Total Cadmium(Cd)
Limits (ppm)	100
MDL(ppm)	2
Specimen Description	Result (ppm)
1. Multi-color coating on paper board (box & puzzle)	ND
2. Transparent adhesive plastic tape (end of cord)	ND

Remark: The above limit was quoted according to Annex XVII Items 23 of REACH Regulation (EC) no. 1907/2006 & amendment no. 552/2009 (formerly known as Directive 91/338/EEC).

- Note: 1. ppm =mg/kg
2. MDL = Method Detection Limit
3. ND = Not Detected (lower than MDL)
4. The sample(s) was (were) analyzed on behalf of the applicant as mixing sample in one testing.

\*\*\*\*\*

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DPI Laboratory (Dongguan) Limited \* DPI Laboratory Services Limited  
Unit F 3/F Dongshan Industrial district, Aubuiwei, Zhangmutou, Dongguan, China

Tel : (86-769)87712112-1702 Fax : (86-769)87712480 Postcode : 523619

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### K) Phthalate Content Test

With reference to EN14372:2004. Analysis by Gas Chromatography/Mass Spectrometry (GC-MS).

Test Result: (Unit: %, w/w)

Test Item(s)	1	2	Permissible Limit (% , w/w)
Dibutyl Phthalate (DBP)	ND	ND	--
Benzylbutyl Phthalate (BBP)	ND	ND	--
Di-(2-ethylhexyl)Phthalate(DEHP)	ND	ND	--
Total (DBP+BBP+DEHP)	ND	ND	0.1%
Diisononyl Phthalate (DINP)	ND	ND	--
Di-n-octyl Phthalate (DNOP)	ND	ND	--
Diisodecyl Phthalate (DIDP)	ND	ND	--
Total (DINP+DNOP+DIDP)	ND	ND	0.1%

Remark: The above limit was quoted according to Annex XVII Items 51 & 52 of the REACH Regulation (EC) no. 1907/2006 & amendment no. 552/2009 (formerly known as Directive 2005/84/EC) for phthalate content in toys and children articles.

#### Specimen Description:

1. Multi-color coating on paper board (box & puzzle)
2. Transparent adhesive plastic tape (end of cord)

Note: 1. 0.1% = 1000ppm = 1000mg/kg

2. ND = Not detected
3. Method Detection Limit (MDL) for DBP BBP, DEHP, DNOP, DINP and DIDP =0.01% respectively.
4. % = Percentage by weight
5. "--" = Not regulated
6. The sample(s) was (were) analyzed on behalf of the applicant as mixing sample in one testing.

\*\*\*\*\*

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### L)Directive 2009/48/EC of The European Parliament and of The Council--Heavy Element Migration

#### Content

Test method: Refer to FprEN71-3:2013.

#### **Test Result: (Unit: mg/kg)**

Test Item(s)		1	2	Migration Limit in scraped-off material (mg/kg)	MDL
Lead *	(Pb)	ND	ND	160	2ppb
Cadmium *	(Cd)	ND	ND	23	2 ppb
Mercury *	(Hg)	ND	ND	94	10 ppb
Antimony	(Sb)	ND	ND	560	1ppm
Arsenic *	(As)	ND	ND	47	2 ppb
Barium	(Ba)	17.2	18.8	56000	1 ppm
Selenium	(Se)	ND	ND	460	1 ppm
Aluminum	(Al)	456.0	1100.0	70000	1 ppm
Boron	(B)	21.1	58.2	15000	1 ppm
Cobalt*	(Co)	ND	ND	130	15 ppb
Copper	(Cu)	ND	ND	7700	1 ppm
Manganese	(Mn)	37.0	22.0	15000	1 ppm
Nickel	(Ni)	ND	ND	930	1 ppm
Strontium	(Sr)	26.0	25.4	56000	1 ppm
Tin*	(Sn)	3.3	ND	180000	15 ppb
Zinc	(Zn)	17.3	34.2	46000	1 ppm
Chromium(III)*	Cr3+	ND	ND	460	2 ppb
Chromium(VI)*	Cr6+	ND	ND	0.2	2 ppb
Organic tin**	--	ND***	ND***	12	0.02ppm

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Test Item(s)		3	4	5	6	7	8	Migration Limit in scraped-off material (mg/kg)	MDL
Lead *	(Pb)	ND	ND	ND	ND	ND	ND	160	2ppb
Cadmium *	(Cd)	ND	ND	ND	ND	ND	ND	23	2 ppb
Mercury *	(Hg)	ND	ND	ND	ND	ND	ND	94	10 ppb
Antimony	(Sb)	ND	ND	ND	ND	ND	ND	560	1ppm
Arsenic *	(As)	ND	ND	ND	ND	ND	ND	47	2 ppb
Barium	(Ba)	ND	ND	11.4	ND	ND	ND	56000	1 ppm
Selenium	(Se)	ND	ND	ND	ND	ND	ND	460	1 ppm
Aluminum	(Al)	40.9	53.6	264.0	ND	46.4	37.3	70000	1 ppm
Boron	(B)	15.1	ND	51.0	ND	ND	ND	15000	1 ppm
Cobalt*	(Co)	6.9	ND	ND	ND	ND	ND	130	15 ppb
Copper	(Cu)	ND	ND	ND	ND	ND	ND	7700	1 ppm
Manganese	(Mn)	20.5	11.4	16.6	ND	10.4	7.2	15000	1 ppm
Nickel	(Ni)	ND	ND	ND	ND	ND	ND	930	1 ppm
Strontium	(Sr)	19.5	35.0	43.5	ND	ND	ND	56000	1 ppm
Tin*	(Sn)	25.9	ND	ND	3.5	ND	ND	180000	15 ppb
Zinc	(Zn)	7.9	16.8	13.6	ND	20.7	18.0	46000	1 ppm
Chromium(III)*#	Cr3+	ND	ND	ND	ND	ND	ND	460	2 ppb
Chromium(VI)*#	Cr6+	ND	ND	ND	ND	ND	ND	0.2	2 ppb
Organic tin**	--	ND***	ND***	ND***	ND***	ND***	ND***	12	0.02ppm

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Test Item(s)		9	10	11	12	13	14	15	Migration Limit in scraped-off material (mg/kg)	MDL
Lead *	(Pb)	ND	ND	ND	ND	ND	ND	ND	160	2ppb
Cadmium *	(Cd)	ND	ND	ND	ND	ND	ND	ND	23	2 ppb
Mercury *	(Hg)	ND	ND	ND	ND	ND	ND	ND	94	10 ppb
Antimony	(Sb)	ND	ND	ND	ND	ND	ND	ND	560	1ppm
Arsenic *	(As)	ND	ND	ND	ND	ND	ND	ND	47	2 ppb
Barium	(Ba)	ND	ND	5.5	ND	ND	ND	5.9	56000	1 ppm
Selenium	(Se)	ND	ND	ND	ND	ND	ND	ND	460	1 ppm
Aluminum	(Al)	20.7	21.2	21.9	42.3	43.9	ND	35.7	70000	1 ppm
Boron	(B)	ND	ND	ND	ND	ND	ND	ND	15000	1 ppm
Cobalt*	(Co)	ND	ND	ND	ND	ND	ND	ND	130	15 ppb
Copper	(Cu)	ND	ND	ND	ND	ND	ND	ND	7700	1 ppm
Manganese	(Mn)	ND	ND	5.6	ND	ND	ND	12.4	15000	1 ppm
Nickel	(Ni)	ND	ND	ND	ND	ND	ND	ND	930	1 ppm
Strontium	(Sr)	ND	ND	ND	ND	ND	ND	ND	56000	1 ppm
Tin*	(Sn)	ND	ND	ND	ND	ND	ND	ND	180000	15 ppb
Zinc	(Zn)	12.4	13.7	17.0	22.0	23.9	ND	28.8	46000	1 ppm
Chromium(III)*#	Cr3+	ND	ND	ND	ND	ND	ND	ND	460	2 ppb
Chromium(VI)*#	Cr6+	ND	ND	ND	ND	ND	ND	ND	0.2	2 ppb
Organic tin**	--	ND***	ND***	ND***	ND***	ND***	ND***	ND***	12	0.02ppm

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### Specimen Description:

1. White surfaced gray paper board excluded coating (puzzle)
2. Brown corrugated paper w/glue (box)
3. Multi-color coating on paper board (box)
4. Multi-color coating on paper board (puzzle)
5. White surfaced gray paper board excluded coating (box)
6. Transparent adhesive plastic tape (end of cord)
7. Purple cord (box)
8. Green cord (box)
9. Orange cord (box)
10. Pink cord (box)
11. Yellow cord (box)
12. Red cord (box)
13. Blue cord (box)
14. Cream cord (box)
15. Vivid orange cord (box)

Note: 1. \* =Analyzed by ICPMS.

2. All element except for \*item analyzed by ICPOES.

3. # = The substance is calculated by the test results of Chromium element.  
The MDL is evaluated for Chromium.

4. \*\*= Analyzed by GCMS.

5. MDL = Method detection limit

6. ND= not detected=below method detection limit

7. ppm = Part per million

8. ppb = Part per billion

9. \*\*\*= As specified by client, there are: MBT/DBT/TBT/TeBT/TPhT/MOT/DOT/TcyT to be analyzed, the result is total value of the above eight organic tin

10. mg/kg = ppm

11. \*= 1) For Specimen of No1-No.2 Chromium(III) & Chromium(VI) test results are copied from subcontractor of GTI Lab's report GS133113.

2) No1-No.2 Chromium(III) test results ND=<5ppm, No1-No.2 Chromium(VI) test results ND=<0.1ppm.

\*\*\*\*\*

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### M)Organotin compounds

Test Method: With reference to ISO 17353:2004, analysis was performed by GCMS.

The Result:

Test Items	Unit	MDL	1	2	3	4	5	6
Tributyl tin(TBT)	%	0.01	ND	ND	ND	ND	ND	ND
Triphenyl tin (TPT)	%	0.01	ND	ND	ND	ND	ND	ND
Tricyclohexyltin(TCyT)	%	0.01	ND	ND	ND	ND	ND	ND
Trioctyltin(TOT)	%	0.01	ND	ND	ND	ND	ND	ND
Tripropyltin(TPrT)	%	0.01	ND	ND	ND	ND	ND	ND
Sum of tri-substituted Organotins	%	--	ND	ND	ND	ND	ND	ND
Dibutyltin(DBT)	%	0.01	ND	ND	ND	ND	ND	ND
Diocetyl tin(DOT)	%	0.01	ND	ND	ND	ND	ND	ND

Specimen Description:

1. Multi-color coating on paper board (box & puzzle)
2. Transparent adhesive plastic tape (end of cord)
3. White surfaced gray paper board (puzzle & box) & Brown corrugated paper w/glue (box)
4. Purple cord (box) & Green cord (box) & Orange cord (box)
5. Pink cord (box) & Yellow cord (box) & Vivid orange cord (box)
6. Red cord (box) & Blue cord (box) & Cream cord (box)

Remark:

1. ND= Not Detected(<MDL)
2. MDL = Method Detection Limit
3. %=percentage
4. Single components with an amount of <0.01% were not considered in the calculation of the sum. In the case of All five tri-substituted organotins were not detected, the result is stated n.d.
5. The assessment for tri-substituted organotins is based on the sum of TBT, TPT, TOT, TcyT and TPrT only.
6. The sample(s) was (were) analyzed on behalf of the applicant as mixing sample in one testing.

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### Note:

- (1) Organostannic compounds Reference information: Entry 20 of Regulation(EC) No 552/2009 and 276/2010 amending Annex XVII of REACH Regulation(EC) No 1907/2006(previously restricted under Dirctive 2002/62/EC and 2009/425/EC)
- (a) Shall not be placed on the market, or used, as substances or in mixtures where the substance or mixtures is acting as biocide in free association paint.
- (b) Shall not be placed on the market, or used, as substances or in mixtures where the substance or mixtures acts as biocide to prevent the fouling by micro-organisms, plants or animals of:
- (b-1) all craft irrespective of their length intended for use in marine, coastal, estuarine and inland waterways and lakes.
- (b-2) cages, floats, nets and any other appliances or equipment used for fish or shellfish farming;
- (b-3) any totally or partly submerged appliance or equipment.
- (c) Shall not be placed on the market, or used, as substances or in mixtures where the substance or mixture is intended for use in the treatment of industrial waters.
- (d) TBT and TPT compounds shall not be used after 1 July 2010 in articles where the concentration in the articles, or part thereof, is greater than the equivalent of 0.1% by weight of tin, otherwise, articles shall not be placed on the market.
- (e) DBT compounds shall not be used after 1 January 2012 in mixtures and articles for supply to the general public where the concentration in the mixture or the article, or part thereof, is greater than the equivalent of 0.1% by weight of tin; articles and mixtures shall not be placed on the market.
- (f) DOT compounds shall not be used after 1 January 2012 in some textile, childcare article etc. for supply to , or use by, the general public, where the concentration in the article, or part thereof, is greater than the equivalent of 0.1% by weight of tin; otherwise, articles shall not be placed on the market.

Please refer to Regulation (EC) No 552/2009 and 276/2010 to get more detail information.

\*\*\*\*\*

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### **N)European Regulation (EC) No. 1907/2006 (REACH) Annex XVII and its amendments - Azocolourants**

Method : Refers to EN 14362-1:2012, analysis was performed by Gas Chromatography / Mass Spectrometry (GC-MS).

Test Result: (Unit: mg/kg)

No.	Amines Substances	CAS No.	1	2
1.	4-Aminobiphenyl/Xenylaminie/Biphenyl-4-ylamine	92-67-1	ND	ND
2.	Benzidine	92-87-5	ND	ND
3.	4-Chloro-o-Toluidine	95-69-2	ND	ND
4.	2-Naphthylamine	91-59-8	ND	ND
5.	o-Aminoazotoluene/4-o-tolylazo-o-toluidine/4-amino-2',3-dimethylazobenzene	97-56-3	ND	ND
6.	2-Amino-4-nitrotoluene/5-nitro-o-toluidine	99-55-8	ND	ND
7.	p-Chloroaniline/4-chloroaniline	106-47-8	ND	ND
8.	2,4-diaminoanisol/4-methoxy-m-phenylenediamine	615-05-4	ND	ND
9.	4,4'-Diaminodiphenylmethane/4,4-methylenedianiline	101-77-9	ND	ND
10.	3,3'-Dichlorobenzidine/3,3' dichlorobiphenyl-4,4'-ylenediamine	91-94-1	ND	ND
11.	3,3'-Dimethoxybenzidine/o-dianisidine	119-90-4	ND	ND
12.	3,3'-Dimethylbenzidine/4,4'-bi-o-Toluidine	119-93-7	ND	ND
13.	3,3'-Dimethyl-4,4'-diaminodiphenylmethane/4,4'-methylenedi-o-toluidine	838-88-0	ND	ND
14.	p-cresinin/6-methoxy-m-toluidine	120-71-8	ND	ND
15.	4,4'-Methylen-bis-(2-chloroaniline)/2,2'-dichloro-4,4'methylene-dianiline	101-14-4	ND	ND
16.	4,4'-Oxydianiline	101-80-4	ND	ND
17.	4,4'-Thiodianiline	139-65-1	ND	ND
18.	o-Toluidine/2-aminotoluene	95-53-4	ND	ND
19.	2,4-Toluylendiamine/4-methyl-m-phenylenediamine	95-80-7	ND	ND
20.	2,4,5-trimethylaniline	137-17-7	ND	ND
21.	4-aminoazobenzene *	60-09-3	ND	ND
22.	o-anisidine/2-methoxyaniline	90-04-0	ND	ND
23.	2,4-Xylidin	95-68-1	ND	ND
24.	2,6-Xylidin	87-62-7	ND	ND

### Overall Rating

- \* The BS EN 14362-1 will enable further cleavage of 4-aminoazobenzene to non-forbidden amines: aniline (CAS-number 62-53-3) and 1,4-phenylenediamine (CAS-number 106-50-3). Due to detection limits, only aniline may be detected. Therefore, the test method of EN 14362-3 is employed to verify the presence of 4-aminoazobenzene.

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No.	Amines Substances	CAS No.	3
1.	4-Aminobiphenyl/Xenylaminie/Biphenyl-4-ylamine	92-67-1	ND
2.	Benzidine	92-87-5	ND
3.	4-Chloro-o-Toluidine	95-69-2	ND
4.	2-Naphthylamine	91-59-8	ND
5.	o-Aminoazotoluene/4-o-tolylazo-o-toluidine/4-amino-2',3-dimethylazobenzene	97-56-3	ND
6.	2-Amino-4-nitrotoluene/5-nitro-o-toluidine	99-55-8	ND
7.	p-Chloroaniline/4-chloroaniline	106-47-8	ND
8.	2,4-diaminoanisol/4-methoxy-m-phenylenediamine	615-05-4	ND
9.	4,4'-Diaminodiphenylmethane/4,4-methylenedianiline	101-77-9	ND
10.	3,3'-Dichlorobenzidine/3,3' dichlorobiphenyl-4,4'-ylenediamine	91-94-1	ND
11.	3,3'-Dimethoxybenzidine/o-dianisidine	119-90-4	ND
12.	3,3'-Dimethylbenzidine/4,4'-bi-o-Toluidine	119-93-7	ND
13.	3,3'-Dimethyl-4,4'-diaminodiphenylmethane/4,4'-methylenedi-o-toluidine	838-88-0	ND
14.	p-cresinin/6-methoxy-m-toluidine	120-71-8	ND
15.	4,4'-Methylen-bis-(2-chloroaniline)/2,2'-dichloro-4,4'methylene-dianiline	101-14-4	ND
16.	4,4'-Oxydianiline	101-80-4	ND
17.	4,4'-Thiodianiline	139-65-1	ND
18.	o-Toluidine/2-aminotoluene	95-53-4	ND
19.	2,4-Toluylendiamine/4-methyl-m-phenylenediamine	95-80-7	ND
20.	2,4,5-trimethylaniline	137-17-7	ND
21.	4-aminoazobenzene *	60-09-3	ND
22.	o-anisidine/2-methoxyaniline	90-04-0	ND
23.	2,4-Xylidin	95-68-1	ND
24.	2,6-Xylidin	87-62-7	ND

### Overall Rating

- \* The BS EN 14362-1 will enable further cleavage of 4-aminoazobenzene to non-forbidden amines: aniline (CAS-number 62-53-3) and 1,4-phenylenediamine (CAS-number 106-50-3), Due to detection limits, only aniline may be detected. Therefore, the test method of EN 14362-3 is employed to verify the presence of 4-aminoazobenzene.

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### Test Part Description:

1. Purple cord (box) & Green cord (box) & Orange cord (box)
2. Pink cord (box) & Yellow cord (box) & Vivid orange cord (box)
3. Red cord (box) & Blue cord (box) & Cream cord (box)

Remark : Test specimen was taken randomly from the sample submitted by client/applicant.

Entries 43.1 and 43.2 of Regulation (EC) No 552/2009 amending Annex XVII of REACH Regulation (EC) No 1907/2006 requirements:

- No Relevant amine exceeding 30mg/kg

### Forbidden Arylamines for Azo Dye Regulations

- No.,1-22 – Entries 43.1 and 43.2 of Regulation (EC) No 552/2009 amending Annex XVII of REACH Regulation (EC) No 1907/2006 requirements.
- No.1-24 – Client's requirement

- Note :
- 1 mg/kg = ppm
  - 2 ND = Not Detected
  3. Detection Limit = 5 mg/kg
  4. The sample(s) was (were) analyzed on behalf of the applicant as mixing sample in one testing.

\*\*\*\*\*

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\*

Item No.	Sample Description
978-0-7353-3767-1	Counting Jumbo Puzzle
978-0-7353-3768-8	Little Prince Jumbo Puzzle
978-0-7353-3305-5	Construction Jumbo Puzzle
978-0-7353-3308-6	Princess Jumbo Puzzle
978-0-7353-3306-2	Dinosaurs Jumbo Puzzle
978-0-7353-3266-9	Our World Jumbo Puzzle
978-0-7353-3406-9	Map of USA Jumbo Puzzle
978-0-7353-3307-9	On the Farm Jumbo Puzzle
978-0-7353-3417-5	At the Zoo Jumbo Puzzle

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### Sample Photo:



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DPI Laboratory (Dongguan) Limited \* DPI Laboratory Services Limited  
Unit F 3/F Dongshan Industrial district, Aubuiwei, Zhangmutou, Dongguan, China

Tel : (86-769)87712112-1702 Fax : (86-769)87712480 Postcode : 523619



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DPI authenticate the photo on original report only

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

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DPI Laboratory (Dongguan) Limited \* DPI Laboratory Services Limited  
Unit F 3/F Dongshan Industrial district, Aubuiwei, Zhangmutou, Dongguan, China

Tel : (86-769)87712112-1702 Fax : (86-769)87712480 Postcode : 523619