

JWORLD INDUSTRY CO., LTD.
 30 Jinto-gil, 21beon-gil
 Gwangju-si, Gyeonggi-do
 Korea

The following sample(s) was/were submitted and identified by/on behalf of the client as:-

SGS File No. : AYHA16-09721
Sample Description : COLOR FOLDER
Detail of Sample : Color folder mat
Style no./Item no. : -
Order No. : -
Manufacturer : -
Country of Origin : -
Country of Destination : -
Labeled Age Grading : None
Requested Test Age Grading : None
SGS Assessed Age Grading : All ages
Received Date : 2016. 09. 08
Test Period : 2016. 09. 08 to 2016. 09. 20
Test Method : For further details, please refer to following page (s)
Test Results : For further details, please refer to following page (s)
Result Summary :

Test Requested	Conclusion
US Public Law 110-314 (Consumer Product Safety Improvement Act of 2008, CPSIA):	-
- ASTM F963-11 : Standard Consumer Safety Specification on Toy Safety	PASS
- Flammability of toys (16 C.F.R. 1500.44)	PASS
- Small part (16 C.F.R. Part 1501)	PASS
- Sharp points and edges (16 C.F.R. 1500.48 and 49)	PASS
- CPSIA section 108 – Phthalates	PASS

SGS Korea Co., Ltd.



Daesung Lee / Technical Manager

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Test Report

No. F690101/LF-CTSAYHA16-09721

Issued Date : 2016. 09. 20

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Result Summary

ASTM F963-11

As specified in ASTM F963-11 standard consumer safety specification on toy safety.

Clauses Relevant to Sample

Clause	Description	Result
4	Safety Requirements	-
4.1	Material Quality **	Pass
4.2	Flammability Test (16 C.F.R. 1500.44)	Pass (See Note 1)
4.3	Toxicology	-
4.3.5	Heavy Elements	Pass (See Note 2)
	4.3.5.2- Heavy Metal in Substrate Materials	
4.6	Small Objects	-
4.6.1	Small Objects (16 C.F.R. 1501)	Pass
4.7	Accessible Edges (16 C.F.R. 1500.49)	Pass
4.12	Plastic Film	Pass
4.9	Accessible Points (16 C.F.R. 1500.48)	Pass
5	Safety Labeling Requirements	-
5.2	Age Grading Labeling	Pass
7	Producer's Markings	-
7.1	Producer's Markings (*Remark: The toy should be marked with name and address of the producer or the distributor)	*Remark
8	Test Methods	-
8.5	Normal Use Testing	Pass
8.7	Impact Test	Pass
8.8	Torque Test	Pass
8.9	Tension Test	Pass
8.10	Compression Test	Pass

N/A = Not Applicable

** Visual Examination

N/C = Not Conducted (As per Client's request.)

Note *1:

Flammability Test (Clause 4.2)

- Flammability Test on Solid

Sample	Burning Rate (inch/sec)
Color folder mat	0.1*

*Burning rate has been rounded to the nearest one tenth of an inch per second.

Requirement : A toy / component is considered a "flammable solid" if it ignites and burns with a self-sustaining flame at a rate greater than 0.1 in/sec along its major axis.

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Note *2 :
 Heavy Elements (Clause 4.3.5)
 ASTM F963-11, Clause 4.3.5.2- Heavy Elements in Toys Substrate Materials

Total Lead

Method (non-metallic materials): CPSC-CH-E1002-08.1 - Standard Operation Procedure for Determining Total Lead (Pb) in Non-Metal Children Product. Analysis was performed by ICP-OES.

Test Items	MDL	Result(s)			Total Limit (ppm)
		<u>1</u>	<u>2</u>	<u>3</u>	
Lead (Pb)	20	N.D.	N.D.	N.D.	100
Conclusion	-	PASS	PASS	PASS	-

Test Items	MDL	Result(s)			Total Limit (ppm)
		<u>4</u>	<u>5</u>	<u>6</u>	
Lead (Pb)	20	N.D.	N.D.	N.D.	100
Conclusion	-	PASS	PASS	PASS	-

Method (metal materials): CPSC-CH-E1001-8.1 - Standard Operating Procedure for Determining Total Lead (Pb) in Children's Metal Products (Including Children's Metal Jewelry). Analysis was performed by ICP-OES.

Test Items	MDL	Result(s)	Total Limit (ppm)
		<u>7</u>	
Lead (Pb)	50)	N.D.	100
Conclusion	-	PASS	-

Description :

- | | |
|--------------------------------------|---------------------------|
| 1. Ivory PU | 2. Grey PU |
| 3. Translucency zipper teeth plastic | 4. Brown foam (inner mat) |
| 5. Green foam (inner mat) | 6. Red foam (inner mat) |
| 7. Zipper mat | |

Note. (1) N.D. = Not detected. (< MDL)
 (2) MDL = Method Detection Limit

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Note *2 :
 Heavy Elements (Clause 4.3.5)
 ASTM F963-11, Clause 4.3.5.2- Heavy Elements in Toys Substrate Materials

Soluble Heavy Metals

Method : With reference to ASTM F963-11 Clause 8.3. Analysis was performed by ICP-OES.

Element	Results (Unit : mg/kg)							
	Soluble Lead (Pb)	Soluble Antimony (Sb)	Soluble Arsenic (As)	Soluble Barium (Ba)	Soluble Cadmium (Cd)	Soluble Chromium (Cr)	Soluble Mercury (Hg)	Soluble Selenium (Se)
Limit	90	60	25	1000	75	60	60	500
MDL	5	5	2.5	10	5	2.5	2.5	10
1	N. D.	N. D.	N. D.	N. D.	N. D.	N. D.	N. D.	N. D.
2	N. D.	N. D.	N. D.	N. D.	N. D.	N. D.	N. D.	N. D.
3	N. D.	N. D.	N. D.	N. D.	N. D.	N. D.	N. D.	N. D.
4	N. D.	N. D.	N. D.	12.3	N. D.	N. D.	N. D.	N. D.
5	N. D.	N. D.	N. D.	N. D.	N. D.	N. D.	N. D.	N. D.
6	N. D.	N. D.	N. D.	N. D.	N. D.	N. D.	N. D.	N. D.

Description :

- | | |
|--------------------------------------|---------------------------|
| 1. Ivory PU | 2. Grey PU |
| 3. Translucency zipper teeth plastic | 4. Brown foam (inner mat) |
| 5. Green foam (inner mat) | 6. Red foam (inner mat) |

Note. (1) N. D. = not detected (< MDL)
 (2) MDL = Method Detection Limit
 (3) Results shown are of the adjusted analytical result.

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Phthalates

Method: With reference to CPSC-CH-C1001-09.3. Analysis was performed by GC-MS.

Concentration of phthalates in components of toy that can be placed in the mouth or childcare article

Test item	CAS No.	MDL	Result(s)			Permissible Limit
			1	2	3	
Dibutyl Phthalate (DBP)	84-74-2	0.005 %	ND	ND	ND	0.1 %
Benzylbutyl Phthalate (BBP)	85-68-7	0.005 %	ND	ND	ND	0.1 %
Bis-(2-ethylhexyl) Phthalate (DEHP)	117-81-7	0.005 %	ND	ND	ND	0.1 %
Diisononyl Phthalate (DINP)	28553-12-0 / 68515-48-0	0.005 %	ND	ND	ND	0.1 %
Di-n-octyl Phthalate (DNOP)	117-84-0	0.005 %	ND	ND	ND	0.1 %
Diisodecyl Phthalate (DIDP)	26761-40-0 / 68515-49-1	0.005 %	ND	ND	ND	0.1 %
Conclusion	-	-	PASS	PASS	PASS	-

Concentration of phthalates in components of toy that can be placed in the mouth or childcare article

Test item	CAS No.	MDL	Result(s)			Permissible Limit
			4	5	6	
Dibutyl Phthalate (DBP)	84-74-2	0.005 %	ND	ND	ND	0.1 %
Benzylbutyl Phthalate (BBP)	85-68-7	0.005 %	ND	ND	ND	0.1 %
Bis-(2-ethylhexyl) Phthalate (DEHP)	117-81-7	0.005 %	ND	ND	ND	0.1 %
Diisononyl Phthalate (DINP)	28553-12-0 / 68515-48-0	0.005 %	ND	ND	ND	0.1 %
Di-n-octyl Phthalate (DNOP)	117-84-0	0.005 %	ND	ND	ND	0.1 %
Diisodecyl Phthalate (DIDP)	26761-40-0 / 68515-49-1	0.005 %	ND	ND	ND	0.1 %
Conclusion	-	-	PASS	PASS	PASS	-

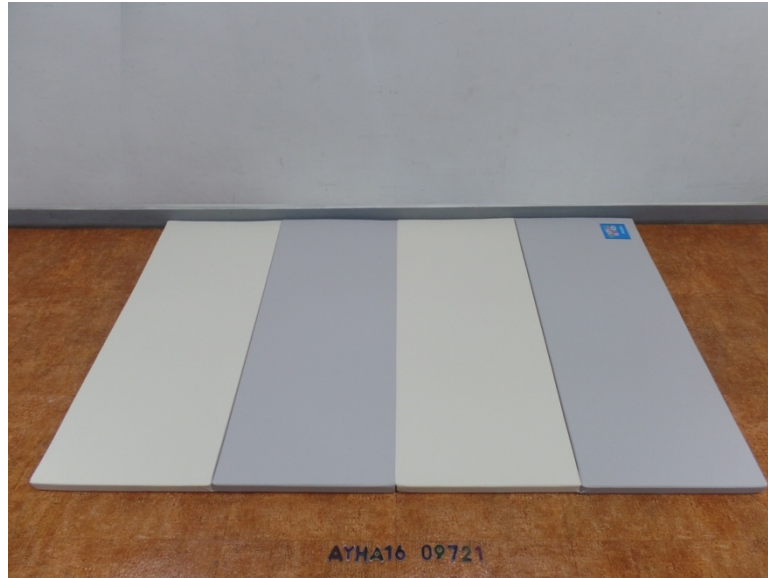
Description :

- | | |
|--------------------------------------|---------------------------|
| 1. Ivory PU | 2. Grey PU |
| 3. Translucency zipper teeth plastic | 4. Brown foam (inner mat) |
| 5. Green foam (inner mat) | 6. Red foam (inner mat) |

Note: (1) ND = not detected (< MDL)
 (2) MDL = Method Detection Limit
 (3) % = percentage by weight
 (4) 1% = 10000ppm (mg/kg)

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Picture of Sample as Received :



*** End of Report ***

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