

TEST REPORT

Number : TWNH00080832

Date : Sep 12, 2019

Sample Description:

One (1) Groups of Submitted Samples Said To Be :

Item Name : Vestergaard 小直液海報筆 6 色(Black, White, Red, Sky blue, Yellow.green, Brickroad)

Quantity : 1 Group

Date Sample Received : Sep 03, 2019

Date Test Started : Sep 03, 2019

Test Conducted:

As requested by the applicant, for details please refer to attached pages.

Conclusion:

<u>Tested sample</u>	<u>Standard</u>	<u>Result</u>
Submitted Samples	Mechanical and physical properties – As per applicant's request with reference to European standard on safety of toys EN 71 part 1:2014 + A1 : 2018	Pass
	Flammability test – As per applicant's request with reference to European standard on safety of toys EN 71 part 2: 2011 + A1:2014	Pass
Tested Components of Submitted Samples	19 Toxic Element Migration Test – As per applicant's request with reference to European standard on safety of toys EN71-3:2013+A3:2018	Pass

Authorized By:

On behalf of Intertek Testing Services
Taiwan Limited



Matt Wang
Sr. Manager

Signed by:

Thomas Chou
Manager



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Test Conducted

1. Mechanical and Physical Properties

As per applicant's request with reference to European standard on safety of toys EN 71 part 1:2014 + A1 : 2018

Appropriate age group for testing : For ages over 6 years

<u>Clause</u>	<u>Testing item</u>	<u>Assessment</u>
4*	General requirements	P
5	Toys intended for children under 36 months	NA
6	Packaging	NA
7*	Warnings, markings and instructions for use	P#

Remarks : P = Pass : NA = Not applicable
 # = The applicant has certified that proper age grading, label and marking will put on the final product, and the age grading, label and marking certified meet the requirement of this standard. It is applicant's responsibility to make sure the final product with the age grading, label and marking as certified.
 * = The following subclauses of the standard are found applicable :

- 1) 4.1 Material cleanliness
- 2) 4.7 Edges
- 3) 4.8 Points and metallic, wires
- 4) 7.1 General
- 5) 7.2 Toys not intended for children under 36 months

2. Flammability Test

As per applicant's request with reference to European standard on safety of toys EN 71 part 2 : 2011 + A1:2014.

<u>Clause</u>	<u>Testing item</u>	<u>Assessment</u>
4.1	General	
	- Cellulose nitrate	P
	- Pile surface	NA
	- Flammable gas and liquid	P
4.2	Toys to be worn on the head (5.2/5.3/5.4)	NA
4.3	Toy disguise costumes and toys intended to be worn by a child in play (5.4)	NA
4.4	Toys intended to be entered by a child (5.4)	NA
4.5	Soft-filled toys(5.5)	NA

Remarks : P = Pass
 NA = Not applicable



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3. 19 Toxic Element Migration Test

As per applicant's request with reference to EN71-3:2013+A3:2018 and followed by Inductively Coupled Plasma Atomic Emission Spectrometry, Inductively Coupled Argon Mass Spectrometry, Ion Chromatography- Inductively Coupled Plasma-Mass Spectrometry, UV-Vis Spectrophotometer (UV-VIS), Inductively Coupled Plasma-Optical Emission Spectrometer (ICP-OES), Inductively Coupled Plasma Mass Spectrometer (ICP-MS) and Gas Chromatography-Mass Spectrometer (GC-MS), if necessary.

Category II: Liquid or sticky

Element	Result (mg/kg)						Detection limit (mg/kg)	Limit (mg/kg)
	(4)	(5)	(8)	(9)	(11)	(13)		
Aluminium (Al)	550	430	1100	1100	1100	ND	100	1406
Antimony (Sb)	ND	ND	ND	ND	ND	ND	1.0	11.3
Arsenic (As)	ND	ND	ND	ND	ND	ND	0.5	0.9
Barium (Ba)	ND	130	ND	ND	ND	ND	10	375
Boron (B)	ND	ND	ND	ND	ND	ND	50	300
Cadmium (Cd)	ND	ND	ND	ND	ND	ND	0.1	0.3
Chromium (III) (Cr ³⁺)	ND	ND	ND	ND	ND	ND	1.0	9.4
Chromium (VI) (Cr ⁶⁺)	ND	ND	ND	ND	ND	ND	0.003	0.005
Cobalt (Co)	ND	ND	ND	ND	ND	ND	1.0	2.6
Copper (Cu)	ND	ND	ND	ND	ND	ND	10	156
Lead (Pb)	0.2	0.4	0.2	0.2	0.3	ND	0.1	0.5
Manganese (Mn)	ND	ND	ND	ND	ND	ND	10	300
Mercury (Hg)	ND	ND	ND	ND	ND	ND	1.0	1.9
Nickel (Ni)	ND	ND	ND	ND	ND	ND	1.0	18.8
Selenium (Se)	ND	ND	ND	ND	ND	ND	1.0	9.4
Strontium (Sr)	ND	ND	ND	ND	ND	ND	100	1125
Tin (Sn)	ND	ND	ND	ND	ND	ND	10	3750
Organic tin	ND	ND	ND	ND	ND	ND	0.15	0.2
Zinc (Zn)	ND	ND	ND	ND	ND	ND	100	938



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3. 19 Toxic Element Migration Test

Category III: Scraped-off toy material

Element	Result (mg/kg)				Detection limit (mg/kg)	Limit (mg/kg)
	(1)	(2)	(3)	(6)		
Aluminium (Al)	ND	ND	ND	ND	300	70000
Antimony (Sb)	ND	ND	ND	ND	10	560
Arsenic (As)	ND	ND	ND	ND	10	47
Barium (Ba)	ND	ND	ND	ND	10	18750
Boron (B)	ND	ND	ND	ND	50	15000
Cadmium (Cd)	ND	ND	ND	ND	5.0	17
Chromium (III) (Cr ³⁺)	ND	ND	ND	ND	10	460
Chromium (VI) (Cr ⁶⁺)	ND	ND	ND	ND	0.053	0.053
Cobalt (Co)	ND	ND	ND	ND	10	130
Copper (Cu)	ND	ND	ND	ND	10	7700
Lead (Pb)	ND	ND	ND	ND	1.0	23
Manganese (Mn)	ND	ND	ND	ND	10	15000
Mercury (Hg)	ND	ND	ND	ND	10	94
Nickel (Ni)	ND	ND	ND	ND	10	930
Selenium (Se)	ND	ND	ND	ND	10	460
Strontium (Sr)	ND	ND	ND	ND	100	56000
Tin (Sn)	ND	ND	ND	ND	10	180000
Organic tin	ND	ND	ND	ND	3.0	12
Zinc (Zn)	ND	ND	ND	ND	100	46000

Element	Result (mg/kg)				Detection limit (mg/kg)	Limit (mg/kg)
	(7)	(10)	(12)	(14)		
Aluminium (Al)	ND	ND	ND	ND	300	70000
Antimony (Sb)	ND	ND	ND	ND	10	560
Arsenic (As)	ND	ND	ND	ND	10	47
Barium (Ba)	ND	ND	ND	ND	10	18750
Boron (B)	ND	ND	ND	ND	50	15000
Cadmium (Cd)	ND	ND	ND	ND	5.0	17
Chromium (III) (Cr ³⁺)	ND	ND	ND	ND	10	460
Chromium (VI) (Cr ⁶⁺)	ND	ND	ND	ND	0.053	0.053
Cobalt (Co)	ND	ND	ND	ND	10	130
Copper (Cu)	ND	ND	ND	ND	10	7700
Lead (Pb)	ND	ND	ND	ND	1.0	23
Manganese (Mn)	ND	ND	ND	ND	10	15000
Mercury (Hg)	ND	ND	ND	ND	10	94
Nickel (Ni)	ND	ND	ND	ND	10	930
Selenium (Se)	ND	ND	ND	ND	10	460
Strontium (Sr)	ND	ND	ND	ND	100	56000
Tin (Sn)	ND	ND	ND	ND	10	180000
Organic tin	ND	ND	ND	ND	3.0	12
Zinc (Zn)	ND	ND	ND	ND	100	46000



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3. 19 Toxic Element Migration Test

Remarks: ND = Not detected

- Organic tin test result was expressed as tributyl tin.
- The migration limit (0.053 mg/kg) of chromium (VI) for category (III) is quoted from Directive (EU) 2018/725 and will be enforced from 18 November 2019.
- According to the Annex F to EN 71-3:2013, the content of Chromium (III) from the migration solution was calculated through the formula: Chromium (III) = Total Chromium – Chromium(VI).
- The scope of confirmation test for organic tin includes Methyl tin, Butyl tin, Dibutyl tin, Tributyl tin, Tetra-butyl tin, n-Octyl tin, Di-n-octyl tin, Di-n-propyl tin, Diphenyl tin, Triphenyl tin, Trimethyltin, Dimethyltin, Tricyclohexyltin and Trioctyltin and reports the total value after converted to Tributyl tin.

Tested Components:

- (1) Semitransparent plastic cap/barrel
 - (2) Red plastic written/plug
 - (3) Brickroad plastic written/plug
 - (4) Red ink
 - (5) Brickroad ink
 - (6) Yellow green plastic written/plug
 - (7) Sky blue plastic written/plug
 - (8) Yellow green ink
 - (9) Sky blue ink
 - (10) White plastic written/plug
 - (11) White ink
 - (12) Black plastic written/plug
 - (13) Black ink
 - (14) White polymer fiber tip (substrate)
-



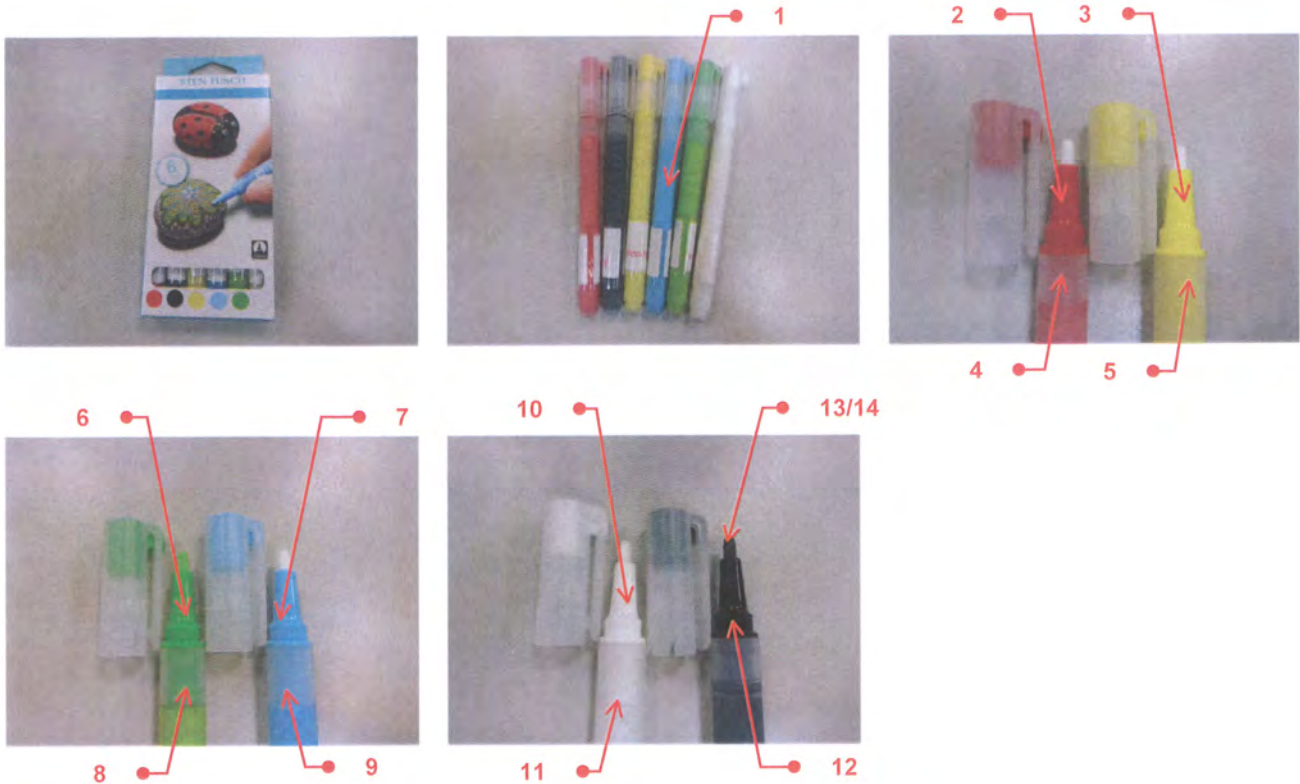
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Sample photo:



End of Report

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