

Report No.: **244413262d 001**

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Client: **HAPPY ARTS&CRAFTS(NINGBO)CO.,LTD**

Contact Information: **HAPE INTERNATIONAL(NINGBO)LTD**
9-27Nanhai Road, Dagang industrial City, Beilun, Ningbo, China

Test item(s): **Toy**

Identification/
Model No(s): **Refer to detail list**

Sample obtaining method: **Sending by customer**

Condition at delivery: **Test item complete and undamaged.**

Sample Receiving date: **2022-03-17**

Testing Period: **2022-03-17 to 2022-05-16**

Place of testing: **Chemical laboratory Shanghai, Toys laboratory Shanghai**

Test Specification:

1. EN 71-1:2014+A1:2018 Mechanical and physical properties
2. 2009/48/EC CE marking
3. 2009/48/EC Labeling Requirement
(Importer/ Manufacturer Mark, Product Identification, Washing/ Cleaning instruction)
4. EN 71-2 : 2020 Flammability
5. EN 71-3:2019+A1:2021 Migration of 19 Elements

Test result:

PASS
PASS
Please refer to result page
PASS
PASS

Other information:

Country of Origin: China

Packaging provided: Yes

The provided age grade of the item: M003: over 3 years; Others: for 4 to 99 years.

The appropriate age grade of the item: M003:over 18 months; Others: over 3 years.

The item was tested: M003:over 18 months; Others: over 3 years.

For and on behalf of
TÜV Rheinland (Shanghai) Co., Ltd.



Wice Wang/

General Manager

Rainbow Xu/

Senior Technical Executive

2022-05-17

2022-05-17

Date

Name/Position

Date

Name/Position

Sample information is provided by customer. Test result is drawn according to the kind and extent of tests performed.

This test report relates to the above mentioned test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any safety mark on this or similar products.

"Decision Rule" document announced in our website (<https://www.tuv.com/landingpage/en/qm-gcn/>) describes the statement of conformity and its rule of enforcement for test results are applicable throughout this test report.

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ASIN NO	Item NO	EN Item Name	CN Item Name	Age
B07GBXW64L	E6009,E6009B	Vertigo	夸得瑞拉超值直轨套	4-99Y
B00IHZZHRG	E6030,E6030B	Marble Catchers	夸得瑞拉升级配件-滚珠台	4-99Y
B0011P3BHU	E6035,E6035B	Marble Racers	夸得瑞拉升级配件-玻璃珠	4-99Y
B079NQS42L	E6020,E6020A	Spiral	夸得瑞拉—回旋栈道套	4-99Y
B079NXX8JM	E6023,E6023A	Jumper	夸得瑞拉—飞越响铃	4+
B079NNW9CH	E6022,E6022A	xylophone	夸得瑞拉—天籁琴轨	4+
	E6025,E6025A	Control-Block Multipack	夸得瑞拉升级配件 - 变轨积木组合	4-99Y



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Material List:

Item: Refer to detail list

Material No.	Material	Color	Location
M001	Whole Product	Multi-color	E6009,E6009B
M002	Whole Product	Multi-color	E6030,E6030B
M003	Whole Product	Multi-color	E6035,E6035B
M004	Whole Product	Multi-color	E6020,E6020A
M005	Whole Product	Multi-color	E6023,E6023A
M006	Whole Product	Multi-color	E6022,E6022A
M007	Whole Product	Multi-color	E6025,E6025A
M008	Wood	Nature	Solid wood
M009	Wood	Nature	Plywood
M010	Coating	Transparent	On wood
M011	Coating	Yellow	On wood
M012	Coating	Red brown	On wood
M013	Coating	Orange	On metal
M014	Coating	Red	On wood
M015	Coating	Blue	On wood
M016	Coating	Green	On wood
M017	Coating	Orange	On wood
M018	Coating	Lake blue	On wood
M019	Coating	Tan/Red	On wood
M020	Plastic	Blue	Slide
M021	Plastic	Red	Slide
M022	Plastic	Orange	Slide
M023	Plastic	Green	Slide
M024	Plastic	White	Toy bricks
M025	Plastic	Orange	Slide
M026	Plastic	Purple	Toy bricks
M027	Plastic	Blue	Metal keyboard
M028	Plastic	Cream	Widget
M029	Plastic	Beige	Button



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M030	Plastic	Red	Widget
M031	Plastic	Green	Plate
M032	Plastic	Lake blue	Plate
M033	Plastic	Red	Widget
M034	Plastic	Green	Fan blade
M035	Plastic	Orange	Plate
M036	Textile	White	Cord
M037	Textile	White	Bag
M038	Textile	White+red	Label
M041	Metal + coating	Lake blue	Container
M042	Rubber	Black	Rubber feet
M043	Glass	Transparent	Ball
M044	Paper + printing + adhesive	Black+white	On wood
M045	Paper + printing	Multi-color	Instruction



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1. EN 71-1:2014+A1:2018 Mechanical and physical properties

Test No:	T001
Material No:	M001-M007
4. General requirements	
4.1 Material cleanliness	PASS
4.7 Edges	PASS
4.8 Points and metallic wires	PASS
4.20 Acoustics	PASS*1
4.22 Small balls	PASS*2
6. Packaging	PASS*3
7. Warnings, markings and instructions for use	
7.1 General	PASS*3
7.2 Toys not intended for children under 36 months	PASS*3

The clause and/or sub-clause would be indicated only in the test report whichever applicable. The comprehensive result report is available upon request.

Remark:

- *1 This clause is only applicable to M005 and M006.
- *2 This clause is only applicable to M001, M003, M004, M005 and M006.
- *3 This clause is only applicable to M001 and M004.



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2. 2009/48/EC CE Marking
Test result:

	Test No:	T001
	Material No:	M001-M007
CE-marking		PASS

3. 2009/48/EC Labeling Requirement (Importer/ Manufacturer Mark, Product Identification, Washing/ Cleaning instruction)
Test result:

	Test No:	T001
	Material No:	M001-M007
Importer/ Manufacturer Mark (European Company name and address)+		Present on product and package
Product Identification - type, batch, serial or model number+		Present on product and package

Remark:

+ These labeling shall be indicated on the toy, or where that is not possible, on its packaging or in a documents accompanying the toys.

The correct adherence to all requirements according to directive 2009/48/EC in regards to the marking (name or trademark and contact address of the manufacturer respectively the marking for identification [type, batch, model or serial no.]) of the toy can only be confirmed by the manufacturer, his delegate or the person who brings it onto the market. The marked article were assessed, however, they can not be evaluated in the frame of this test.



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4. EN 71-2 : 2020 Flammability

Test result:

	Test No:	T001
	Material No:	M001-M007
4.1 General		PASS

The clause and/or sub-clause would be indicated only in the test report whichever applicable. The comprehensive result report is available upon request.



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5. EN 71-3:2019+A1:2021 Migration of 19 Elements

Test Method: with reference to EN 71-3:2019+A1:2021, analyzed by ICP-OES / ICP-MS / LC-ICP-MS/IC-UV/GC-MS.

3) For scraped-off toy materials:
Test Result:

				Test No.	T001	T002	T003
				Material No.	M008	M009	M010
Test Parameter	Unit	RL	Regulatory Requirement	Result	Result	Result	Result
Aluminium (Al)	mg/kg	10	28,130	< RL	< RL	10.3	
Antimony (Sb)	mg/kg	5	560	< RL	< RL	< RL	
Arsenic (As)	mg/kg	5	47	< RL	< RL	< RL	
Barium (Ba)	mg/kg	2.5	18,750	4.0	< RL	3.8	
Boron (B)	mg/kg	10	15,000	< RL	< RL	< RL	
Cadmium (Cd)	mg/kg	1	17	< RL	< RL	< RL	
Chromium III (Cr(III))	mg/kg	10	460	< RL	< RL	< RL	
Chromium VI (Cr(VI))	mg/kg	0.045	0.053	< RL	< RL	< RL	
Cobalt (Co)	mg/kg	2.5	130	< RL	< RL	< RL	
Copper (Cu)	mg/kg	2.5	7,700	< RL	129	3.8	
Lead (Pb)	mg/kg	2.5	23	< RL	< RL	< RL	
Manganese (Mn)	mg/kg	2.5	15,000	3.3	< RL	< RL	
Mercury (Hg)	mg/kg	2.5	94	< RL	< RL	< RL	
Nickel (Ni)	mg/kg	2.5	930	< RL	< RL	< RL	
Selenium (Se)	mg/kg	10	460	< RL	< RL	< RL	
Strontium (Sr)	mg/kg	2.5	56,000	6.7	5.2	2.5	
Tin (Sn)	mg/kg	1.0	180,000	< RL	< RL	< RL	
Organic Tin [^]	mg/kg	0.2	12	-	-	-	
Zinc (Zn)	mg/kg	10	46,000	11.2	< RL	230	

Abbreviation:

- < less than
- RL = Reporting Limit
- mg/kg denotes milligram per kilogram
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Test Result:

Test No.				T004(*1)(< 100mg)	T005	T006
Material No.				M011	M013	M014
Test Parameter	Unit	RL	Regulatory Requirement	Result	Result	Result
Aluminium (Al)	mg/kg	10	28,130	90.7	18.6	422
Antimony (Sb)	mg/kg	5	560	< RL	< RL	< RL
Arsenic (As)	mg/kg	5	47	< RL	< RL	< RL
Barium (Ba)	mg/kg	2.5	18,750	< RL	15.9	4.0
Boron (B)	mg/kg	10	15,000	< RL	10.9	< RL
Cadmium (Cd)	mg/kg	1	17	< RL	< RL	< RL
Chromium III (Cr(III))	mg/kg	10	460	< RL	< RL	< RL
Chromium VI (Cr(VI))	mg/kg	0.045	0.053	< RL	< RL	< RL
Cobalt (Co)	mg/kg	2.5	130	< RL	< RL	< RL
Copper (Cu)	mg/kg	2.5	7,700	< RL	< RL	< RL
Lead (Pb)	mg/kg	2.5	23	< RL	< RL	< RL
Manganese (Mn)	mg/kg	2.5	15,000	3.3	74.3	8.9
Mercury (Hg)	mg/kg	2.5	94	< RL	< RL	< RL
Nickel (Ni)	mg/kg	2.5	930	< RL	< RL	< RL
Selenium (Se)	mg/kg	10	460	< RL	< RL	< RL
Strontium (Sr)	mg/kg	2.5	56,000	< RL	13.6	37.8
Tin (Sn)	mg/kg	1.0	180,000	< RL	< RL	< RL
Organic Tin [^]	mg/kg	0.2	12	-	-	-
Zinc (Zn)	mg/kg	10	46,000	344	< RL	407

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Test Result:

Test No.				T007	T008	T009
Material No.				M015	M016	M017
Test Parameter	Unit	RL	Regulatory Requirement	Result	Result	Result
Aluminium (Al)	mg/kg	10	28,130	2270	255	185
Antimony (Sb)	mg/kg	5	560	< RL	< RL	< RL
Arsenic (As)	mg/kg	5	47	< RL	< RL	< RL
Barium (Ba)	mg/kg	2.5	18,750	7.1	17.5	< RL
Boron (B)	mg/kg	10	15,000	143	144	75.8
Cadmium (Cd)	mg/kg	1	17	< RL	< RL	< RL
Chromium III (Cr(III))	mg/kg	10	460	< RL	< RL	< RL
Chromium VI (Cr(VI))	mg/kg	0.045	0.053	< RL	< RL	< RL
Cobalt (Co)	mg/kg	2.5	130	< RL	< RL	< RL
Copper (Cu)	mg/kg	2.5	7,700	< RL	< RL	< RL
Lead (Pb)	mg/kg	2.5	23	< RL	< RL	< RL
Manganese (Mn)	mg/kg	2.5	15,000	6.9	10.1	9.8
Mercury (Hg)	mg/kg	2.5	94	< RL	< RL	< RL
Nickel (Ni)	mg/kg	2.5	930	< RL	< RL	< RL
Selenium (Se)	mg/kg	10	460	< RL	< RL	< RL
Strontium (Sr)	mg/kg	2.5	56,000	7.0	3.5	9.6
Tin (Sn)	mg/kg	1.0	180,000	< RL	< RL	< RL
Organic Tin^	mg/kg	0.2	12	-	-	-
Zinc (Zn)	mg/kg	10	46,000	224	118	335

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Test Result:

				Test No.	T010	T011	T012
				Material No.	M018	M019	M020
Test Parameter	Unit	RL	Regulatory Requirement	Result	Result	Result	Result
Aluminium (Al)	mg/kg	10	28,130	240	314	< RL	< RL
Antimony (Sb)	mg/kg	5	560	< RL	< RL	< RL	< RL
Arsenic (As)	mg/kg	5	47	< RL	< RL	< RL	< RL
Barium (Ba)	mg/kg	2.5	18,750	24.6	53.7	< RL	< RL
Boron (B)	mg/kg	10	15,000	69.5	< RL	< RL	< RL
Cadmium (Cd)	mg/kg	1	17	< RL	< RL	< RL	< RL
Chromium III (Cr(III))	mg/kg	10	460	< RL	< RL	< RL	< RL
Chromium VI (Cr(VI))	mg/kg	0.045	0.053	< RL	< RL	< RL	< RL
Cobalt (Co)	mg/kg	2.5	130	< RL	< RL	< RL	< RL
Copper (Cu)	mg/kg	2.5	7,700	< RL	< RL	< RL	< RL
Lead (Pb)	mg/kg	2.5	23	< RL	< RL	< RL	< RL
Manganese (Mn)	mg/kg	2.5	15,000	11.4	9.3	< RL	< RL
Mercury (Hg)	mg/kg	2.5	94	< RL	< RL	< RL	< RL
Nickel (Ni)	mg/kg	2.5	930	< RL	< RL	< RL	< RL
Selenium (Se)	mg/kg	10	460	< RL	< RL	< RL	< RL
Strontium (Sr)	mg/kg	2.5	56,000	2.6	4.5	< RL	< RL
Tin (Sn)	mg/kg	1.0	180,000	< RL	< RL	< RL	< RL
Organic Tin^	mg/kg	0.2	12	-	-	-	-
Zinc (Zn)	mg/kg	10	46,000	136	221	< RL	< RL

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Test Result:

				Test No.	T013	T014	T015
				Material No.	M021	M022	M023
Test Parameter	Unit	RL	Regulatory Requirement	Result	Result	Result	Result
Aluminium (Al)	mg/kg	10	28,130	< RL	< RL	< RL	< RL
Antimony (Sb)	mg/kg	5	560	< RL	< RL	< RL	< RL
Arsenic (As)	mg/kg	5	47	< RL	< RL	< RL	< RL
Barium (Ba)	mg/kg	2.5	18,750	< RL	< RL	< RL	< RL
Boron (B)	mg/kg	10	15,000	< RL	< RL	< RL	< RL
Cadmium (Cd)	mg/kg	1	17	< RL	< RL	< RL	< RL
Chromium III (Cr(III))	mg/kg	10	460	< RL	< RL	< RL	< RL
Chromium VI (Cr(VI))	mg/kg	0.045	0.053	< RL	< RL	< RL	< RL
Cobalt (Co)	mg/kg	2.5	130	< RL	< RL	< RL	< RL
Copper (Cu)	mg/kg	2.5	7,700	< RL	< RL	< RL	< RL
Lead (Pb)	mg/kg	2.5	23	< RL	< RL	< RL	< RL
Manganese (Mn)	mg/kg	2.5	15,000	< RL	< RL	< RL	< RL
Mercury (Hg)	mg/kg	2.5	94	< RL	< RL	< RL	< RL
Nickel (Ni)	mg/kg	2.5	930	< RL	< RL	< RL	< RL
Selenium (Se)	mg/kg	10	460	< RL	< RL	< RL	< RL
Strontium (Sr)	mg/kg	2.5	56,000	< RL	< RL	< RL	< RL
Tin (Sn)	mg/kg	1.0	180,000	< RL	< RL	< RL	< RL
Organic Tin [^]	mg/kg	0.2	12	-	-	-	-
Zinc (Zn)	mg/kg	10	46,000	< RL	< RL	< RL	< RL

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Test Result:

Test No.				T016	T017	T018
Material No.				M024	M025	M026
Test Parameter	Unit	RL	Regulatory Requirement	Result	Result	Result
Aluminium (Al)	mg/kg	10	28,130	< RL	< RL	< RL
Antimony (Sb)	mg/kg	5	560	< RL	< RL	< RL
Arsenic (As)	mg/kg	5	47	< RL	< RL	< RL
Barium (Ba)	mg/kg	2.5	18,750	< RL	< RL	< RL
Boron (B)	mg/kg	10	15,000	< RL	< RL	< RL
Cadmium (Cd)	mg/kg	1	17	< RL	< RL	< RL
Chromium III (Cr(III))	mg/kg	10	460	< RL	< RL	< RL
Chromium VI (Cr(VI))	mg/kg	0.045	0.053	< RL	< RL	< RL
Cobalt (Co)	mg/kg	2.5	130	< RL	< RL	< RL
Copper (Cu)	mg/kg	2.5	7,700	< RL	< RL	< RL
Lead (Pb)	mg/kg	2.5	23	< RL	< RL	< RL
Manganese (Mn)	mg/kg	2.5	15,000	< RL	< RL	< RL
Mercury (Hg)	mg/kg	2.5	94	< RL	< RL	< RL
Nickel (Ni)	mg/kg	2.5	930	< RL	< RL	< RL
Selenium (Se)	mg/kg	10	460	< RL	< RL	< RL
Strontium (Sr)	mg/kg	2.5	56,000	< RL	< RL	< RL
Tin (Sn)	mg/kg	1.0	180,000	< RL	< RL	< RL
Organic Tin [^]	mg/kg	0.2	12	-	-	-
Zinc (Zn)	mg/kg	10	46,000	< RL	< RL	< RL

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Test Result:

				Test No.	T019	T020	T021
				Material No.	M027	M028	M029
Test Parameter	Unit	RL	Regulatory Requirement	Result	Result	Result	Result
Aluminium (Al)	mg/kg	10	28,130	< RL	< RL	< RL	< RL
Antimony (Sb)	mg/kg	5	560	< RL	< RL	< RL	< RL
Arsenic (As)	mg/kg	5	47	< RL	< RL	< RL	< RL
Barium (Ba)	mg/kg	2.5	18,750	< RL	< RL	< RL	< RL
Boron (B)	mg/kg	10	15,000	< RL	< RL	< RL	< RL
Cadmium (Cd)	mg/kg	1	17	< RL	< RL	< RL	< RL
Chromium III (Cr(III))	mg/kg	10	460	< RL	< RL	< RL	< RL
Chromium VI (Cr(VI))	mg/kg	0.045	0.053	< RL	< RL	< RL	< RL
Cobalt (Co)	mg/kg	2.5	130	< RL	< RL	< RL	< RL
Copper (Cu)	mg/kg	2.5	7,700	< RL	< RL	< RL	< RL
Lead (Pb)	mg/kg	2.5	23	< RL	< RL	< RL	< RL
Manganese (Mn)	mg/kg	2.5	15,000	< RL	< RL	< RL	< RL
Mercury (Hg)	mg/kg	2.5	94	< RL	< RL	< RL	< RL
Nickel (Ni)	mg/kg	2.5	930	< RL	< RL	< RL	< RL
Selenium (Se)	mg/kg	10	460	< RL	< RL	< RL	< RL
Strontium (Sr)	mg/kg	2.5	56,000	< RL	< RL	< RL	< RL
Tin (Sn)	mg/kg	1.0	180,000	< RL	< RL	< RL	< RL
Organic Tin^	mg/kg	0.2	12	-	-	-	-
Zinc (Zn)	mg/kg	10	46,000	< RL	< RL	< RL	< RL

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Test Result:

				Test No.	T022	T023	T024
				Material No.	M030	M031	M032
Test Parameter	Unit	RL	Regulatory Requirement	Result	Result	Result	Result
Aluminium (Al)	mg/kg	10	28,130	< RL	< RL	< RL	< RL
Antimony (Sb)	mg/kg	5	560	< RL	< RL	< RL	< RL
Arsenic (As)	mg/kg	5	47	< RL	< RL	< RL	< RL
Barium (Ba)	mg/kg	2.5	18,750	< RL	< RL	< RL	< RL
Boron (B)	mg/kg	10	15,000	< RL	< RL	< RL	< RL
Cadmium (Cd)	mg/kg	1	17	< RL	< RL	< RL	< RL
Chromium III (Cr(III))	mg/kg	10	460	< RL	< RL	< RL	< RL
Chromium VI (Cr(VI))	mg/kg	0.045	0.053	< RL	< RL	< RL	< RL
Cobalt (Co)	mg/kg	2.5	130	< RL	< RL	< RL	< RL
Copper (Cu)	mg/kg	2.5	7,700	< RL	< RL	< RL	< RL
Lead (Pb)	mg/kg	2.5	23	< RL	< RL	< RL	< RL
Manganese (Mn)	mg/kg	2.5	15,000	< RL	< RL	< RL	< RL
Mercury (Hg)	mg/kg	2.5	94	< RL	< RL	< RL	< RL
Nickel (Ni)	mg/kg	2.5	930	< RL	< RL	< RL	< RL
Selenium (Se)	mg/kg	10	460	< RL	< RL	< RL	< RL
Strontium (Sr)	mg/kg	2.5	56,000	< RL	< RL	< RL	< RL
Tin (Sn)	mg/kg	1.0	180,000	< RL	< RL	< RL	< RL
Organic Tin [^]	mg/kg	0.2	12	-	-	-	-
Zinc (Zn)	mg/kg	10	46,000	< RL	< RL	< RL	< RL

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Test Result:

				Test No.	T025	T026	T027
				Material No.	M033	M034	M035
Test Parameter	Unit	RL	Regulatory Requirement	Result	Result	Result	Result
Aluminium (Al)	mg/kg	10	28,130	< RL	< RL	< RL	< RL
Antimony (Sb)	mg/kg	5	560	< RL	< RL	< RL	< RL
Arsenic (As)	mg/kg	5	47	< RL	< RL	< RL	< RL
Barium (Ba)	mg/kg	2.5	18,750	< RL	< RL	< RL	< RL
Boron (B)	mg/kg	10	15,000	< RL	< RL	< RL	< RL
Cadmium (Cd)	mg/kg	1	17	< RL	< RL	< RL	< RL
Chromium III (Cr(III))	mg/kg	10	460	< RL	< RL	< RL	< RL
Chromium VI (Cr(VI))	mg/kg	0.045	0.053	< RL	< RL	< RL	< RL
Cobalt (Co)	mg/kg	2.5	130	< RL	< RL	< RL	< RL
Copper (Cu)	mg/kg	2.5	7,700	< RL	< RL	< RL	< RL
Lead (Pb)	mg/kg	2.5	23	< RL	< RL	< RL	< RL
Manganese (Mn)	mg/kg	2.5	15,000	< RL	< RL	< RL	< RL
Mercury (Hg)	mg/kg	2.5	94	< RL	< RL	< RL	< RL
Nickel (Ni)	mg/kg	2.5	930	< RL	< RL	< RL	< RL
Selenium (Se)	mg/kg	10	460	< RL	< RL	< RL	< RL
Strontium (Sr)	mg/kg	2.5	56,000	< RL	< RL	< RL	< RL
Tin (Sn)	mg/kg	1.0	180,000	< RL	< RL	< RL	< RL
Organic Tin [^]	mg/kg	0.2	12	-	-	-	-
Zinc (Zn)	mg/kg	10	46,000	< RL	< RL	< RL	< RL

Abbreviation:

- < less than
- RL = Reporting Limit
- mg/kg denotes milligram per kilogram
- mg denotes milligram
- [^] denotes Organic tin are not necessary to be determined when the Tin concentration is less than calculated limit (3.6 mg/kg) or the components were confirmed to be pure metal



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Test Result:

				Test No.	T028	T029	T030
				Material No.	M036	M037	M038
Test Parameter	Unit	RL	Regulatory Requirement	Result	Result	Result	Result
Aluminium (Al)	mg/kg	10	28,130	< RL	< RL	< RL	< RL
Antimony (Sb)	mg/kg	5	560	< RL	< RL	< RL	< RL
Arsenic (As)	mg/kg	5	47	< RL	< RL	< RL	< RL
Barium (Ba)	mg/kg	2.5	18,750	< RL	< RL	< RL	< RL
Boron (B)	mg/kg	10	15,000	< RL	27.3	< RL	< RL
Cadmium (Cd)	mg/kg	1	17	< RL	< RL	< RL	< RL
Chromium III (Cr(III))	mg/kg	10	460	< RL	< RL	< RL	< RL
Chromium VI (Cr(VI))	mg/kg	0.045	0.053	< RL	< RL	< RL	< RL
Cobalt (Co)	mg/kg	2.5	130	< RL	< RL	< RL	< RL
Copper (Cu)	mg/kg	2.5	7,700	< RL	< RL	< RL	< RL
Lead (Pb)	mg/kg	2.5	23	< RL	< RL	< RL	< RL
Manganese (Mn)	mg/kg	2.5	15,000	< RL	< RL	< RL	< RL
Mercury (Hg)	mg/kg	2.5	94	< RL	< RL	< RL	< RL
Nickel (Ni)	mg/kg	2.5	930	< RL	< RL	< RL	< RL
Selenium (Se)	mg/kg	10	460	< RL	< RL	< RL	< RL
Strontium (Sr)	mg/kg	2.5	56,000	< RL	2.9	< RL	< RL
Tin (Sn)	mg/kg	1.0	180,000	< RL	< RL	< RL	< RL
Organic Tin^	mg/kg	0.2	12	-	-	-	-
Zinc (Zn)	mg/kg	10	46,000	< RL	< RL	< RL	< RL

Abbreviation:

- < less than
- RL = Reporting Limit
- mg/kg denotes milligram per kilogram
- mg denotes milligram
- ^ denotes Organic tin are not necessary to be determined when the Tin concentration is less than calculated limit (3.6 mg/kg) or the components were confirmed to be pure metal



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Test Result:

				Test No.	T031	T032	T033
				Material No.	M041	M042	M043
Test Parameter	Unit	RL	Regulatory Requirement	Result	Result	Result	Result
Aluminium (Al)	mg/kg	10	28,130	< RL	< RL	< RL	< RL
Antimony (Sb)	mg/kg	5	560	< RL	< RL	< RL	< RL
Arsenic (As)	mg/kg	5	47	< RL	< RL	< RL	< RL
Barium (Ba)	mg/kg	2.5	18,750	< RL	< RL	< RL	< RL
Boron (B)	mg/kg	10	15,000	< RL	< RL	< RL	< RL
Cadmium (Cd)	mg/kg	1	17	< RL	< RL	< RL	< RL
Chromium III (Cr(III))	mg/kg	10	460	< RL	< RL	< RL	< RL
Chromium VI (Cr(VI))	mg/kg	0.045	0.053	< RL	< RL	< RL	< RL
Cobalt (Co)	mg/kg	2.5	130	< RL	< RL	< RL	< RL
Copper (Cu)	mg/kg	2.5	7,700	< RL	< RL	< RL	< RL
Lead (Pb)	mg/kg	2.5	23	< RL	< RL	< RL	< RL
Manganese (Mn)	mg/kg	2.5	15,000	15.6	< RL	< RL	< RL
Mercury (Hg)	mg/kg	2.5	94	< RL	< RL	< RL	< RL
Nickel (Ni)	mg/kg	2.5	930	< RL	< RL	< RL	< RL
Selenium (Se)	mg/kg	10	460	< RL	< RL	< RL	< RL
Strontium (Sr)	mg/kg	2.5	56,000	< RL	< RL	< RL	< RL
Tin (Sn)	mg/kg	1.0	180,000	< RL	< RL	< RL	< RL
Organic Tin [^]	mg/kg	0.2	12	-	-	-	-
Zinc (Zn)	mg/kg	10	46,000	< RL	< RL	< RL	< RL

Abbreviation:

- < less than
- RL = Reporting Limit
- mg/kg denotes milligram per kilogram
- mg denotes milligram
- [^] denotes Organic tin are not necessary to be determined when the Tin concentration is less than calculated limit (3.6 mg/kg) or the components were confirmed to be pure metal



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Test Result:

Test Parameter	Unit	RL	Test No.	T034	T035
			Material No.	M044	M045
			Regulatory Requirement	Result	Result
Aluminium (Al)	mg/kg	10	28,130	83.5	< RL
Antimony (Sb)	mg/kg	5	560	< RL	< RL
Arsenic (As)	mg/kg	5	47	< RL	< RL
Barium (Ba)	mg/kg	2.5	18,750	< RL	< RL
Boron (B)	mg/kg	10	15,000	< RL	< RL
Cadmium (Cd)	mg/kg	1	17	< RL	< RL
Chromium III (Cr(III))	mg/kg	10	460	< RL	< RL
Chromium VI (Cr(VI))	mg/kg	0.045	0.053	< RL	< RL
Cobalt (Co)	mg/kg	2.5	130	< RL	< RL
Copper (Cu)	mg/kg	2.5	7,700	< RL	< RL
Lead (Pb)	mg/kg	2.5	23	< RL	< RL
Manganese (Mn)	mg/kg	2.5	15,000	6.6	4.7
Mercury (Hg)	mg/kg	2.5	94	< RL	< RL
Nickel (Ni)	mg/kg	2.5	930	< RL	< RL
Selenium (Se)	mg/kg	10	460	< RL	< RL
Strontium (Sr)	mg/kg	2.5	56,000	51.5	52.2
Tin (Sn)	mg/kg	1.0	180,000	< RL	< RL
Organic Tin [^]	mg/kg	0.2	12	-	-
Zinc (Zn)	mg/kg	10	46,000	< RL	< RL

Abbreviation:

- < less than
- RL = Reporting Limit
- mg/kg denotes milligram per kilogram
- mg denotes milligram
- ^ denotes Organic tin are not necessary to be determined when the Tin concentration is less than calculated limit (3.6 mg/kg) or the components were confirmed to be pure metal

Remark:

- * Categorization of toys materials is based on the material texture. According to point H.11 of Annex H to EN 71-3:2019+A1:2021, cosmetic materials with dry, brittle, powder like or pliable texture such as lipstick and eyeshadow are considered as category I materials. However, as a reminder, it cannot preclude the possibility that some national enforcement authorities might take a more stringent action to treat cosmetic materials as sticky and evaluate according to category II requirement as they are intended to be applied on skin and retained for long time.
- *1 According to EN 71-3:2019+A1:2021, the weight of test portion was less than 100mg, but greater than 10mg. The result was calculated as if 100mg of the samples were available.
- *2 According to EN 71-3:2019+A1:2021, the weight of test portion M012 available was less than 10mg, the test for soluble heavy metal content was not performed.

Testing Laboratory accredited by DAkkS according to DIN EN ISO/IEC 17025. The accreditation is valid for the test methods stated in the certificate.

Testing Laboratory accredited by CNAS according to ISO/IEC 17025. The accreditation is valid for the test methods stated in the certificate.



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Sample Photos



E6025,E6025A



E6035,E6035B



E6030,E6030B



E6022,E6022A



E6023,E6023A



E6020,E6020A



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Sample Photo



E6009,E6009B

- END -



