

Report No.: **244444932b 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/ **Refer to detail list**

Model No(s):

Sample obtaining method: **Sending by customer**

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

Sample Receiving date: **2022-08-23**

Testing Period: **2022-08-23 to 2022-09-09**

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

Test Specification:

- | | |
|--|------|
| 1. ASTM F963-17: Mechanical and physical | PASS |
| 2. ASTM F963-17: Flammability on solids and soft toys | PASS |
| 3. CPSIA Sect 103: Tracking label | PASS |
| 4. ASTM F963-17 Sect. 4.3.5.1 and 4.3.5.2 : Soluble heavy metal | PASS |
| 5. ASTM F963-17 Sect. 4.3.5.1 and CPSIA Sect. 101: Total lead content in paint and coating materials | PASS |
| 6. ASTM F963-17 Sect. 4.3.5.2 and CPSIA Sect. 101: Total lead content in substrate materials | PASS |
| 7. Total Lead Content* | PASS |

Test result:

Other information:

Country of Origin: China
Sales Destination: Global
Packaging provided: Artwork
The provided age grade of the item: Over 4 years.
The appropriate age grade of the item: Over 3 years.
The item was tested for over 3 years.
*As per client's requirement

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



2022-09-13

Date

Neo Yang / Assistant Manager

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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HAPE NEW NO.	BEL NO.	DESCRIPTION	中文描述	Test Age group
E8297 , E8297A	24210	Quadrilla XXL	夸得瑞拉益智幼教套装	36M+
E8299A/E8299AL62/	24220/24225/	Junior Inventor XXL Kindergarten Set/Junior Inventor XXL Kindergarten Set/Junior Inventor	科学物理实验台/科学物理实验台(Lipura)/科学物理实验台-螺丝配件/	36M+
B24221/B24222/B24223	24221/24222/24223	XXL - Screw-Set/Junior Inventor XXL - Plastic-Set/Junior Inventor XXL - Wooden-Set	科学物理实验台-塑料配件/科学物理实验台-木配件	



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Material List:

Item: Refer to detail list

Material No.	Material	Color	Location
M001	Whole Product	Multi	E8297 , E8297A
M002	Whole Product	Multi	E8299A/E8299AL62/B24221/B24222/B24223
M003	Plastic	Orange	Slide
M004	Plastic	Transparent	Box
M005	Plastic	Black	On box
M006	Plastic	Red	Slide
M007	Plastic	Beige	Button
M008	Plastic	Purple	Toy bricks
M009	Plastic	White	Toy bricks
M010	Plastic	Blue	Slide
M011	Plastic	Green	Slide
M012	Plastic	Transparent	Slide
M013	Rubber	Black	Rubber feet
M014	Plastic	Red	Slide
M015	Textile	White	Bag
M016	Textile	White	Rope
M017	Textile	Red+white	Label
M018	Glass	Transparent	Marbles
M019	Coating	Blue	On wood
M020	Plastic	Yellow	The handle
M021	Coating	Red	On wood
M022	Coating	Blue	On wood
M023	Coating	Lake blue	On wood
M024	Paper + printing	Multi-color	Card
M025	Coating	Transparent	On wood
M026	Coating	Light Green	On wood
M027	Coating	Silver	On wood
M028	Coating	Black	On wood

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M029	Coating	Orange	On wood
M030	Coating	Gray	On wood
M031	Plastic	Silver	Screw
M032	Plastic	Black	Card
M033	Plastic	Orange	Gear
M034	Plastic	Gray	Tool
M035	Plastic	Red	Rope
M036	Textile	White	Rope



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1.ASTM F963-17: Mechanical and physical
Test result:

Test No:	T001
Material No:	M001, M002
4. Safety requirements	
4.1 Material Quality (visual check)	PASS
4.7 Accessible edges	PASS
4.9 Accessible points	PASS
4.11 Nails and fasteners	PASS*2
4.12 Plastic film	PASS
4.15 Stability and over-load requirements	PASS*2
4.33 Marbles	PASS*1
5. Labeling requirements	
5.11 Small objects, small balls, marbles and balloons	PASS
5.16 Promotional materials	PASS
6. Instructional literature	
6.1 Definition and description	PASS
7. Producer's markings	
7.1 Name and address of the producer or the distributor	PASS

Use and Abuse Tests:

The submitted samples were undergone the use and abuse tests in accordance with FHSA 16 CFR and whichever is applicable the tested age grade.

Age Category	Impact Test	Flexure Test	Torque Test	Tension Test	Compression Test
0-18 Months 16 CFR 1500.51	10 x 4.5 ft	120 Arc 30 Cycles 10 lbs	2 in-lbs	10 lbs	20 lbs
19-36 Months 16 CFR 1500.52	4 x 3 ft	120 Arc 30 Cycles 15 lbs	3 in-lbs	15 lbs	25 lbs
37-96 Months 16 CFR 1500.53	4 x 3 ft	120 Arc 30 Cycles 15 lbs	4 in-lbs	15 lbs	30 lbs

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 M001.

*2 This clause is only applicable to M002.



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2.ASTM F963-17: Flammability on solids and soft toys**Test result:**

	Test No:	T001
	Material No:	M001, M002
4.2 Flammability on solids and soft toys		PASS

The burning rate of the most severe part = DNI

Note: Maximum permissible burning rate = 0.1 Inch/sec.

Abbreviation: DNI = Did Not Ignite / IBE = Ignite But Self-extinguish

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3.CPSIA Sect 103: Tracking label**Test Result:**

Test No:	T001
Material No:	M001, M002
Present On Packaging	PASS
Present On Product	PASS

Remark:

- * If there is a tracking label on the product which is visible through disposable packaging, the packaging need not be marked.
- ** The correct adherence to all requirements according to CPSIA Tracking label in regards to the marking of:
- (1) Manufacturer or private labeler name;
 - (2) Location and date of production of the product;
 - (3) Detailed information on the manufacturing process, such as a batch or run number, or other identifying characteristics; and,
 - (4) Any other information to facilitate ascertaining the specific source of the product;
- can only be confirmed by the manufacturer/trader/applicant. The presence of related information was assessed; however, they cannot be verified in the frame of this test.



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4.ASTM F963-17 Sect. 4.3.5.1 and 4.3.5.2 : Soluble heavy metal

Test method: For paint and similar surface-coating materials: ASTM F963-17 Section 8.3.2 - 8.3.4
Method to Dissolve Soluble Matter for Surface Coatings, Preparation of Test Samples and Test Procedures

For substrate: ASTM F963-17 Section 8.3.5 Soluble Element Test Method for Substrate Materials

This requirement applies to the coating and substrate materials which the sample weight is greater than 10 mg

Test result:

Test No.	Material No.	[mg/kg]							
		Sb	As	Ba	Cd	Cr	Pb	Hg	Se
		Maximum Permissible Limit of Any Toy Materials except Modelling Clay							
		60	25	1000	75	60	90	60	500
		Maximum Permissible Limit of Modelling Clay							
		60	25	250	50	25	90	25	500
		RL							
		2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
T001	M003	< RL	< RL	< RL	< RL	< RL	< RL	< RL	< RL
T002	M004	< RL	< RL	< RL	< RL	< RL	< RL	< RL	< RL
T003	M005	< RL	< RL	< RL	< RL	< RL	< RL	< RL	< RL
T004	M006	< RL	< RL	< RL	< RL	< RL	< RL	< RL	< RL
T005	M007	< RL	< RL	< RL	< RL	< RL	< RL	< RL	< RL
T006	M008	< RL	< RL	< RL	< RL	< RL	< RL	< RL	< RL
T007	M009	< RL	< RL	< RL	< RL	< RL	< RL	< RL	< RL
T008	M010	< RL	< RL	< RL	< RL	< RL	< RL	< RL	< RL
T009	M011	< RL	< RL	< RL	< RL	< RL	< RL	< RL	< RL
T010	M012	< RL	< RL	< RL	< RL	< RL	< RL	< RL	< RL
T011	M013	< RL	< RL	< RL	< RL	< RL	< RL	< RL	< RL
T012	M014	< RL	< RL	< RL	< RL	< RL	< RL	< RL	< RL
T013	M015	< RL	< RL	< RL	< RL	< RL	< RL	< RL	< RL
T014	M016	< RL	< RL	< RL	< RL	< RL	< RL	< RL	< RL
T015	M017	< RL	< RL	< RL	< RL	< RL	< RL	< RL	< RL
T016	M018	< RL	< RL	< RL	< RL	< RL	< RL	< RL	< RL
T017	M019(*1)	< RL	< RL	3.1	< RL	< RL	< RL	< RL	< RL
T018	M020	< RL	< RL	< RL	< RL	< RL	< RL	< RL	< RL
T019	M021	< RL	< RL	< RL	< RL	< RL	< RL	< RL	< RL
T020	M022	< RL	< RL	< RL	< RL	< RL	< RL	< RL	< RL
T021	M023(*1)	< RL	< RL	25.9	< RL	< RL	< RL	< RL	< RL
T022	M024	< RL	< RL	< RL	< RL	< RL	< RL	< RL	< RL
T023	M025	< RL	< RL	< RL	< RL	< RL	< RL	< RL	< RL
T024	M026(*1)	< RL	< RL	32.6	< RL	< RL	< RL	< RL	< RL
T025	M027(*1)	< RL	< RL	< RL	< RL	2.7	< RL	< RL	< RL
T026	M028	< RL	< RL	< RL	< RL	< RL	< RL	< RL	< RL
T027	M029(*1)(*2)	< RL	< RL	5.0	< RL	< RL	< RL	< RL	< RL

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Test No.	Material No.	[mg/kg]							
		Sb	As	Ba	Cd	Cr	Pb	Hg	Se
		Maximum Permissible Limit of Any Toy Materials except Modelling Clay							
		60	25	1000	75	60	90	60	500
		Maximum Permissible Limit of Modelling Clay							
		60	25	250	50	25	90	25	500
		RL							
		2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
T028	M030	< RL	< RL	< RL	< RL	< RL	< RL	< RL	< RL
T029	M031	< RL	< RL	< RL	< RL	< RL	< RL	< RL	< RL
T030	M032	< RL	< RL	< RL	< RL	< RL	< RL	< RL	< RL
T031	M033	< RL	< RL	< RL	< RL	< RL	< RL	< RL	< RL
T032	M034	< RL	< RL	< RL	< RL	< RL	< RL	< RL	< RL
T033	M035	< RL	< RL	< RL	< RL	< RL	< RL	< RL	< RL
T034	M036	< RL	< RL	< RL	< RL	< RL	< RL	< RL	< RL

Abbreviation: < = less than
 RL = Reporting Limit
 mg/kg = milligram per kilogram

Remark:

*1 The material is deemed comply with the requirement of ASTM F963-17 cl. 8.3.4.3 after analytical correction.

* Migration results of eight elements shown are the adjusted analytical results

Element	Sb	As	Ba	Cd	Cr	Pb	Hg	Se
Analytical Correction (in %)	60	60	30	30	30	30	50	60

*2 The weight of test portion available was less than 100 mg, but greater than 10 mg, so results were calculated as if 100 mg of the sample were available.



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5.ASTM F963-17 Sect. 4.3.5.1 and CPSIA Sect. 101: Total lead content in paint and coating materials

Test method: CPSC-CH-E1003-09.1 (Microwave method)

Test result:

Test No.	Material No.	Test Parameter	Unit	RL	Regulatory Requirement	Test Result
T001	M019 + M021 + M022	Lead Content	ppm	10	90	< RL
T002	M023 + M025 + M026	Lead Content	ppm	10	90	< RL
T003	M027 + M028	Lead Content	ppm	10	90	< RL
T004	M029 + M030	Lead Content	ppm	10	90	< RL

Abbreviation: < = less than
RL = Reporting Limit
ppm = parts per million



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6.ASTM F963-17 Sect. 4.3.5.2 and CPSIA Sect. 101: Total lead content in substrate materials

Test method: CPSC-CH-E1001-08.3 and CPSC-CH-E1002-08.3 (Microwave method)

Test result:

Test No.	Material No.	Test Parameter	Unit	RL	Regulatory Requirement	Test Result
T001	M003 + M004 + M005	Lead Content	ppm	10	100	< RL
T002	M006 + M007 + M008	Lead Content	ppm	10	100	< RL
T003	M009 + M010 + M011	Lead Content	ppm	10	100	< RL
T004	M012 + M014 + M031	Lead Content	ppm	10	100	< RL
T005	M032 + M033 + M034	Lead Content	ppm	10	100	< RL
T006	M035 + M020	Lead Content	ppm	10	100	< RL

Abbreviation: < = less than
 RL = Reporting Limit
 ppm = parts per million



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7.Total Lead Content

Test Method: CPSC-CH-E1003-09.1 (Microwave method)

Result:

Test No.	Material No.	Test Parameter	Unit	RL	Customer's Requirement	Result
T001	M019 + M021 + M022	Lead Content	mg/kg	10	40	< RL
T002	M023 + M025 + M026	Lead Content	mg/kg	10	40	< RL
T003	M027 + M028	Lead Content	mg/kg	10	40	< RL
T004	M029 + M030	Lead Content	mg/kg	10	40	< RL

Abbreviation: < = less than
 RL = Reporting Limit
 mg/kg = milligram per kilogram

Remark:

- *1 The requirement is following 16 CFR Part 1303 for
- (1) Paint and other similar surface-coating materials
 - (2) Lead-containing paint
 - (3) Toys and other articles intended for use by children and
 - (4) Furniture article.



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Sample Photos



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