Test Report Number: SHAH01450832

Applicant: HAPE INTERNATIONAL (NINGBO) LTD. Date: 09 Jun, 2022
HAPPY ARTS&CRAFTS(NINGBO)CO.,LTD
9-27 NANHAI ROAD, DAGANG INDUSTRIAL CITY
BEILUN, NINGBO, ZHEJIANG, CHINA.
Attn: DORIS

Sample Description:

Two(2) set s of submitted sample said to be :

Item Name	:	**Creative Peg Puzzle, Pyramid of Play, Shake and Match Shape Sorter.**
Item No.	:	**E0411,E0411B; E0413,E0413A,E0413B; E0407,E0407A.**
Asin No.	:	B00712O1J6, B001ODA2Q4, B004BW8Z14.
Quantity	:	2sets.
Packaging Provided By Applicant	:	Yes.
Labelled Age Group	:	18M+/12M+.
Goods Exported to	:	Global.
Country Of Origin	:	China.

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Tests Conducted:

As requested by the applicant, for details refer to attached page(s).

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Conclusion:

Tested Samples	Standard	Result
Submitted Sample	EN71-1: 2014+ A1: 2018 for Mechanical And Physical Properties	Pass
	EN71-2: 2020 Flammability Test	Pass
Tested component of submitted sample	EN 71-3: 2019 on migration of certain elements & EU 2019/1922 amending 2009/48/EC (effective from May, 20,2021) for Aluminium (Al) migration	Pass
	EN 71-3:2019+A1:2021 on migration of certain elements	Pass

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To be continued

Authorized By:
Intertek Testing Services Ltd .Zhejiang, Ningbo Branch

Peter Chen
General Manager

Intertek Testing Services Ltd .Zhejiang, Ningbo Branch
浙江天祥质量技术服务有限公司宁波分公司
5/F No. 6 Building, Lingyun Industry Park, No.1177 Lingyun Road, Ningbo National Hi-Tech Zone, Ningbo, China, 315000
宁波市高新区凌云路 1177 号凌云产业园 6 号楼 5 层 315000
Tel: +86 574 8818 3650
Fax: +86 574 8818 3680
www.intertek.com
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Tests Conducted

1 Mechanical and Physical Test

As Per European Standard on Safety of Toys EN71-1: 2014+ A1: 2018.

Applicant's Specified Age Group for Testing: 12 months and up for E0407, 18 months and up for E0411&E0413

The submitted samples were undergone the following abuse tests:		
Test	Clause	Parameter
Torque Test	8.3	0.34 Nm
Tension Test	8.4.2.1	90 N
Drop Test	8.5	850 mm x 5times
Impact Test	8.7	1 kg
Compression Test	8.8	110 N
Soaking Test	8.9	--

Clause	Testing Items	Assessment
4	General Requirements	
4.1	Material	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	P
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	Projectile toys	NA
4.18	Aquatic toys and inflatable toys	NA
4.19	Percussion caps specifically designed for use in toys and toys using percussion caps	NA
4.20	Acoustics	P
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
4.26	Toy disguise costumes	NA

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Clause	Testing Items	Assessment
4.27	Flying toys	NA
5	Toys intended for Children under 36 Months	
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	P
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
5.15	Sledges with cords for pulling	NA
6	Packaging	NA
7	Warnings, markings and instructions for use	
7.1	General	P
7.2	Toys not intended for children under 36 months	NA
7.3	Latex balloons	NA
7.4	Aquatic toys	NA
7.5	Functional toys	NA
7.6	Hazardous sharp functional edges and points	NA
7.7	Projectile toys	NA
7.8	Imitation protective masks and helmets	NA
7.9	Toy kites	NA
7.10	Roller skates, inline skates and skateboards and certain other ride-on toys	NA
7.11	Toys intended to be 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 sets	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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Clause	Testing Items	Assessment
7.23	Toys intended to be attached to a cradle, cot or perambulator	NA
7.24	Sledges with cords for pulling	NA
7.25	Flying toys	NA
7.26	Improvised projectiles	NA

Remark： P = Pass NA = Not Applicable

Remark: Additional information according to the Toy Safety Directives 2009/48/EC requirement. These information also appears as a note within the EN 71 but are not standard requirements:

1. Marking

The manufacturer's and importer's name, registered trade name or registered trade mark, the address and the CE-marking shall be indicated on the toy or, where that is not possible, on its packaging or in a document accompany the toy. In addition, manufacturers shall 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.

After checking, it was found that:

	Toy	Packaging
Manufacturer's name	Present	Present
Manufacturer's address	Present	Present
Importer's name	Present	Present
Importer's address	Present	Present
Product identification code	Present	Present
CE-marking	Present	Present

Date Sample Received：20 Apr, 2022

Testing Period：20 Apr, 2022 To 1 Jun, 2022

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To be continued

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Tests Conducted

2 Flammability Test

As per European Standard on Safety of Toys EN71-2: 2020

Clause	Testing Items	Assessment
4.1	General	P
4.2	Toys to be worn on the head	
4.2.2	Beards, moustaches, wigs, etc., made from pile or flowing elements which protrude 50 mm or more from the surface of the toy	NA
4.2.3	Beards, moustaches, wigs, etc., made from pile or flowing elements which protrude less than 50 mm from the surface of the toy	NA
4.2.4	Full or partial moulded head masks	NA
4.2.5	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： P = Pass NA = Not Applicable

Date Sample Received：20 Apr, 2022
Testing Period：20 Apr, 2022 To 5 May, 2022

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To be continued

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Tests Conducted

3 19 Toxic Elements Migration Test

(A) Test Result

As per EN 71-3:2019 and followed by Inductively Coupled Plasma Atomic Emission Spectrometry, Inductively Coupled Argon Mass Spectrometry, Ion Chromatography- Inductively Coupled Plasma-Mass Spectrometry, and Gas Chromatographic - Mass Spectrometry.

Category (III)：Scraped-off toy material

Element	Result (mg/kg)				Limit (mg/kg)
	(1)#	(2)#	(3)#	(4)#	
Aluminium (Al)	< 300	< 300	< 300	< 300	28130◎
Antimony (Sb)	< 10	< 10	< 10	< 10	560
Arsenic (As)	< 10	< 10	< 10	< 10	47
Barium (Ba)	< 10	< 10	< 10	< 10	18750
Boron (B)	< 50	< 50	< 50	< 50	15000
Cadmium (Cd)	< 5	< 5	< 5	< 5	17
Chromium (III) (Cr III) ++	< 10	< 10	< 10	< 10	460
Chromium (VI) (Cr VI) ++	< 0.025	< 0.025	< 0.025	< 0.025	0.053
Cobalt (Co)	< 10	< 10	< 10	< 10	130
Copper (Cu)	< 10	< 10	< 10	< 10	7700
Lead (Pb)	< 10	< 10	< 10	< 10	23
Manganese (Mn)	< 10	< 10	< 10	< 10	15000
Mercury (Hg)	< 10	< 10	< 10	< 10	94
Nickel (Ni)	< 10	< 10	< 10	< 10	930
Selenium (Se)	< 10	< 10	< 10	< 10	460
Strontium (Sr)	< 100	< 100	< 100	< 100	56000
Tin (Sn)	< 10	< 10	< 10	< 10	180000
Organic tin ++	< 3.0	< 3.0	< 3.0	< 3.0	12
Zinc (Zn)	< 100	< 100	< 100	< 100	46000

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To be continued

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Element	Result (mg/kg)				Limit (mg/kg)
	(5)#	(6)#	(7)#	(8)#	
Aluminium (Al)	< 300	< 300	< 300	< 300	28130◎
Antimony (Sb)	< 10	< 10	< 10	< 10	560
Arsenic (As)	< 10	< 10	< 10	< 10	47
Barium (Ba)	< 10	< 10	< 10	< 10	18750
Boron (B)	< 50	< 50	< 50	< 50	15000
Cadmium (Cd)	< 5	< 5	< 5	< 5	17
Chromium (III) (Cr III) ++	< 10	< 10	< 10	< 10	460
Chromium (VI) (Cr VI) ++	< 0.025	< 0.025	< 0.025	< 0.025	0.053
Cobalt (Co)	< 10	< 10	< 10	< 10	130
Copper (Cu)	< 10	< 10	< 10	< 10	7700
Lead (Pb)	< 10	< 10	< 10	< 10	23
Manganese (Mn)	< 10	< 10	< 10	< 10	15000
Mercury (Hg)	< 10	< 10	< 10	< 10	94
Nickel (Ni)	< 10	< 10	< 10	< 10	930
Selenium (Se)	< 10	< 10	< 10	< 10	460
Strontium (Sr)	< 100	< 100	< 100	< 100	56000
Tin (Sn)	< 10	< 10	< 10	< 10	180000
Organic tin ++	< 3.0	< 3.0	< 3.0	< 3.0	12
Zinc (Zn)	< 100	< 100	< 100	104	46000

Element	Result (mg/kg)				Limit (mg/kg)
	(9)#Δ	(10)#	(11)#	(12)#	
Aluminium (Al)	360	< 300	< 300	< 300	28130◎
Antimony (Sb)	< 10	< 10	< 10	< 10	560
Arsenic (As)	< 10	< 10	< 10	< 10	47
Barium (Ba)	75	< 10	< 10	< 10	18750
Boron (B)	123	< 50	< 50	< 50	15000
Cadmium (Cd)	< 5	< 5	< 5	< 5	17
Chromium (III) (Cr III) ++	< 10	< 10	< 10	< 10	460
Chromium (VI) (Cr VI) ++	< 0.025	< 0.025	< 0.025	< 0.025	0.053
Cobalt (Co)	< 10	< 10	< 10	< 10	130
Copper (Cu)	17	< 10	< 10	< 10	7700
Lead (Pb)	< 10	< 10	< 10	< 10	23
Manganese (Mn)	85	< 10	< 10	< 10	15000
Mercury (Hg)	< 10	< 10	< 10	< 10	94
Nickel (Ni)	21	< 10	< 10	< 10	930
Selenium (Se)	< 10	< 10	< 10	< 10	460
Strontium (Sr)	< 100	< 100	< 100	< 100	56000
Tin (Sn)	< 10	< 10	< 10	< 10	180000
Organic tin ++	< 3.0	< 3.0	< 3.0	< 3.0	12
Zinc (Zn)	485	< 100	< 100	< 100	46000

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To be continued

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浙江天祥质量技术服务有限公司宁波分公司

5/F No. 6 Building, Lingyun Industry Park, No.1177 Lingyun Road, Ningbo National Hi-Tech Zone, Ningbo, China, 315000
宁波市高新区凌云路 1177 号凌云产业园 6 号楼 5 层 315000

Tel: +86 574 8818 3650
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Element	Result (mg/kg)				Limit (mg/kg)
	(13)#	(14)#	(15)#	(16)#	
Aluminium (Al)	< 300	< 300	< 300	< 300	28130◎
Antimony (Sb)	< 10	< 10	< 10	< 10	560
Arsenic (As)	< 10	< 10	< 10	< 10	47
Barium (Ba)	99	< 10	< 10	< 10	18750
Boron (B)	103	< 50	< 50	< 50	15000
Cadmium (Cd)	< 5	< 5	< 5	< 5	17
Chromium (III) (Cr III) ++	< 10	< 10	< 10	< 10	460
Chromium (VI) (Cr VI) ++	< 0.025	< 0.025	< 0.025	< 0.025	0.053
Cobalt (Co)	< 10	< 10	< 10	< 10	130
Copper (Cu)	11	< 10	< 10	< 10	7700
Lead (Pb)	13	< 10	< 10	< 10	23
Manganese (Mn)	256	< 10	< 10	< 10	15000
Mercury (Hg)	< 10	< 10	< 10	< 10	94
Nickel (Ni)	< 10	< 10	< 10	< 10	930
Selenium (Se)	< 10	< 10	< 10	< 10	460
Strontium (Sr)	< 100	< 100	< 100	< 100	56000
Tin (Sn)	< 10	< 10	< 10	< 10	180000
Organic tin ++	< 3.0	< 3.0	< 3.0	< 3.0	12
Zinc (Zn)	2430	< 100	< 100	< 100	46000

Element	Result (mg/kg)				Limit (mg/kg)
	(17)#	(18)#	(19)#	(20)#	
Aluminium (Al)	< 300	< 300	< 300	< 300	28130◎
Antimony (Sb)	< 10	< 10	< 10	< 10	560
Arsenic (As)	< 10	< 10	< 10	< 10	47
Barium (Ba)	< 10	< 10	< 10	< 10	18750
Boron (B)	< 50	< 50	< 50	< 50	15000
Cadmium (Cd)	< 5	< 5	< 5	< 5	17
Chromium (III) (Cr III) ++	< 10	< 10	< 10	< 10	460
Chromium (VI) (Cr VI) ++	< 0.025	< 0.025	< 0.025	< 0.025	0.053
Cobalt (Co)	< 10	< 10	< 10	< 10	130
Copper (Cu)	< 10	< 10	< 10	< 10	7700
Lead (Pb)	< 10	< 10	< 10	< 10	23
Manganese (Mn)	< 10	< 10	< 10	< 10	15000
Mercury (Hg)	< 10	< 10	< 10	< 10	94
Nickel (Ni)	< 10	< 10	< 10	< 10	930
Selenium (Se)	< 10	< 10	< 10	< 10	460
Strontium (Sr)	< 100	< 100	< 100	< 100	56000
Tin (Sn)	< 10	< 10	< 10	< 10	180000
Organic tin ++	< 3.0	< 3.0	< 3.0	< 3.0	12
Zinc (Zn)	< 100	< 100	224	< 100	46000

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To be continued

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浙江天祥质量技术服务有限公司宁波分公司

5/F No. 6 Building, Lingyun Industry Park, No.1177 Lingyun Road, Ningbo National Hi-Tech Zone, Ningbo, China, 315000
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Element	Result (mg/kg)				Limit (mg/kg)
	(21)#	(22)	(23)#	(24)#	
Aluminium (Al)	< 300	< 300	< 300	< 300	28130◎
Antimony (Sb)	< 10	< 10	< 10	< 10	560
Arsenic (As)	< 10	< 10	< 10	< 10	47
Barium (Ba)	< 10	< 10	< 10	< 10	18750
Boron (B)	< 50	< 50	< 50	< 50	15000
Cadmium (Cd)	< 5	< 5	< 5	< 5	17
Chromium (III) (Cr III) ++	< 10	< 10	< 10	< 10	460
Chromium (VI) (Cr VI) ++	< 0.025	< 0.025	< 0.025	< 0.025	0.053
Cobalt (Co)	< 10	< 10	< 10	< 10	130
Copper (Cu)	< 10	< 10	< 10	< 10	7700
Lead (Pb)	< 10	< 10	< 10	< 10	23
Manganese (Mn)	< 10	< 10	< 10	< 10	15000
Mercury (Hg)	< 10	< 10	< 10	< 10	94
Nickel (Ni)	< 10	< 10	< 10	< 10	930
Selenium (Se)	< 10	< 10	< 10	< 10	460
Strontium (Sr)	< 100	< 100	< 100	< 100	56000
Tin (Sn)	< 10	< 10	< 10	< 10	180000
Organic tin ++	< 3.0	< 3.0	< 3.0	< 3.0	12
Zinc (Zn)	< 100	< 100	1084	< 100	46000

Element	Result (mg/kg)			Limit (mg/kg)
	(25)#	(26)#	(27)#	
Aluminium (Al)	< 300	< 300	< 300	28130◎
Antimony (Sb)	< 10	< 10	< 10	560
Arsenic (As)	< 10	< 10	< 10	47
Barium (Ba)	< 10	< 10	< 10	18750
Boron (B)	< 50	< 50	< 50	15000
Cadmium (Cd)	< 5	< 5	< 5	17
Chromium (III) (Cr III) ++	< 10	< 10	< 10	460
Chromium (VI) (Cr VI) ++	< 0.025	< 0.025	< 0.025	0.053
Cobalt (Co)	< 10	< 10	< 10	130
Copper (Cu)	< 10	< 10	< 10	7700
Lead (Pb)	< 10	< 10	< 10	23
Manganese (Mn)	< 10	< 10	46	15000
Mercury (Hg)	< 10	< 10	< 10	94
Nickel (Ni)	< 10	< 10	< 10	930
Selenium (Se)	< 10	< 10	< 10	460
Strontium (Sr)	< 100	< 100	< 100	56000
Tin (Sn)	< 10	< 10	< 10	180000
Organic tin ++	< 3.0	< 3.0	< 3.0	12
Zinc (Zn)	177	< 100	< 100	46000

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To be continued

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浙江天祥质量技术服务有限公司宁波分公司

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Remark：mg/kg = Milligram per kilogram
++ = Unless the test results were marked with "#" or "∆", Chromium (III) & Chromium (VI) and Organic tin contents were not directly determined and were derived from migration results of total chromium and tin respectively.

- Organic tin test result was expressed as tributyl tin.

◎ = Aluminium (Al) migration limit [2250mg/kg for Category (I), 560mg/kg for Category (II), 28130mg/kg for Category (III)] was quoted from directive (EU) 2019/1922 amending 2009/48/EC effective from 20 May 2021.

= Confirmation of Chromium (VI) test was performed on the tested component. And the reported value of migration of Chromium (III) = migration value of total Chromium – migration value of Chromium(VI).

∆ = Confirmation test was performed on the tested component. The reported value was calculated by summation of the migration values of Methyl tin, Dimethyl tin, Dibutyl tin, Tributyl tin, Tetrabutyl tin, n-Octyl tin, Di-n-octyl tin, Di-n-propyl tin, Diphenyl tin, Monobutyl tin and Triphenyl tin. Other Organic tin compounds may be also be present in sample as stated in EN 71-3:2019.

Tested Component(s)：See component list in the last section of this report.
Remark： As Requested By Client, The Test Components (3 Red coating on wood(E0407/E0413).(4) Orange coating on wood(E0407/E0413)..(5) Yellow coating on wood(E0407/E0411/E0413)(6) Light green coating on wood(E0407/E0411/E0413). (7) blue coating on wood(E0407/E0411/E0413). (8) Purple coating on wood(E0407/E0413).(9) Black coating on wood(E0407/E0413/E0411).(16) Pink coating on wood(E0411).（20）Dark grey coating on wood(elephant,E0413 was Not Conducted In This Report. Client Claimed These Components Have Been Tested In Our Test Report SHAH01435501 Dated 2022.3.10

(B) Categories of various toy materials

Category I：Dry, brittle, powder like or pliable

Solid toy material from which powder-like material is released during playing and semi-solid materials that may also leave residues on the hands during play. The material can be ingested. Contamination of the hands with the material may contribute to the oral exposure of the material. (e.g. the cores of colouring pencils, chalk, crayons, modelling clays and plaster).

Category II：Liquid or sticky

Fluid or viscous toy material, which can be ingested or to which dermal exposure may occur during playing. (e.g. liquid paints, finger paints, liquid ink in pens, glue sticks, slimes, bubble solution).

Category III：Scraped-off

Solid toy material with or without a coating, which can be ingested as a result of biting, tooth scraping, sucking or licking. (e.g. coatings, lacquers, plastics, paper, textiles, glass, ceramic, metallic, wooden, bone , leather and other materials).

Date Sample Received：20 Apr, 2022
Testing Period：20 Apr, 2022 To 8 Jun, 2022

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To be continued

Intertek Testing Services Ltd .Zhejiang, Ningbo Branch
浙江天祥质量技术服务有限公司宁波分公司
5/F No. 6 Building, Lingyun Industry Park, No.1177 Lingyun Road, Ningbo National Hi-Tech Zone, Ningbo, China, 315000
宁波市高新区凌云路 1177 号凌云产业园 6 号楼 5 层 315000
Tel: +86 574 8818 3650
Fax: +86 574 8818 3680
www.intertek.com
www.intertek.com.cn

Test Report Number： SHAH01450832

Tests Conducted

4 19 Toxic Element Migration Test

(A) Test Result

As per EN 71-3:2019+A1:2021 and followed by Inductively Coupled Plasma Atomic Emission Spectrometry, Inductively Coupled Argon Mass Spectrometry, Ion Chromatography- Inductively Coupled Plasma-Mass Spectrometry, Ion Chromatography with UV-VIS and Gas Chromatographic - Mass Spectrometry.

Category (III)：Scraped-off toy material

Element	Result (mg/kg)				Reporting Limit (mg/kg)	Limit (mg/kg)
	(1)#	(2)#	(3)#	(4)#		
Aluminium (Al)	ND	ND	ND	ND	300	28130
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	17
Chromium (III) (Cr III) ++	ND	ND	ND	ND	10	460
Chromium (VI) (Cr VI) ++	ND	ND	ND	ND	0.025	0.053
Cobalt (Co)	ND	ND	ND	ND	10	130
Copper (Cu)	ND	ND	ND	ND	10	7700
Lead (Pb)	ND	ND	ND	ND	10	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	2.5	180000
Organic tin ++	ND	ND	ND	ND	5	12
Zinc (Zn)	ND	ND	ND	ND	100	46000

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Element	Result (mg/kg)				Reporting Limit (mg/kg)	Limit (mg/kg)
	(5)#	(6)#	(7)#	(8)#		
Aluminium (Al)	ND	ND	ND	ND	300	28130
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	17
Chromium (III) (Cr III) ++	ND	ND	ND	ND	10	460
Chromium (VI) (Cr VI) ++	ND	ND	ND	ND	0.025	0.053
Cobalt (Co)	ND	ND	ND	ND	10	130
Copper (Cu)	ND	ND	ND	ND	10	7700
Lead (Pb)	ND	ND	ND	ND	10	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	2.5	180000
Organic tin ++	ND	ND	ND	ND	5	12
Zinc (Zn)	ND	ND	ND	104	100	46000

Element	Result (mg/kg)				Reporting Limit (mg/kg)	Limit (mg/kg)
	(9)#Δ	(10)#	(11)#	(12)#		
Aluminium (Al)	360	ND	ND	ND	300	28130
Antimony (Sb)	ND	ND	ND	ND	10	560
Arsenic (As)	ND	ND	ND	ND	10	47
Barium (Ba)	75	ND	ND	ND	10	18750
Boron (B)	123	ND	ND	ND	50	15000
Cadmium (Cd)	ND	ND	ND	ND	5	17
Chromium (III) (Cr III) ++	ND	ND	ND	ND	10	460
Chromium (VI) (Cr VI) ++	ND	ND	ND	ND	0.025	0.053
Cobalt (Co)	ND	ND	ND	ND	10	130
Copper (Cu)	17	ND	ND	ND	10	7700
Lead (Pb)	ND	ND	ND	ND	10	23
Manganese (Mn)	85	ND	ND	ND	10	15000
Mercury (Hg)	ND	ND	ND	ND	10	94
Nickel (Ni)	21	ND	ND	ND	10	930
Selenium (Se)	ND	ND	ND	ND	10	460
Strontium (Sr)	ND	ND	ND	ND	100	56000
Tin (Sn)	5.6	ND	ND	ND	2.5	180000
Organic tin ++	ND	ND	ND	ND	5	12
Zinc (Zn)	485	ND	ND	ND	100	46000

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Element	Result (mg/kg)				Reporting Limit (mg/kg)	Limit (mg/kg)
	(13)#	(14)#	(15)#	(16)#		
Aluminium (Al)	ND	ND	ND	ND	300	28130
Antimony (Sb)	ND	ND	ND	ND	10	560
Arsenic (As)	ND	ND	ND	ND	10	47
Barium (Ba)	99	ND	ND	ND	10	18750
Boron (B)	103	ND	ND	ND	50	15000
Cadmium (Cd)	ND	ND	ND	ND	5	17
Chromium (III) (Cr III) ++	ND	ND	ND	ND	10	460
Chromium (VI) (Cr VI) ++	ND	ND	ND	ND	0.025	0.053
Cobalt (Co)	ND	ND	ND	ND	10	130
Copper (Cu)	11	ND	ND	ND	10	7700
Lead (Pb)	13	ND	ND	ND	10	23
Manganese (Mn)	256	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	2.5	180000
Organic tin ++	ND	ND	ND	ND	5	12
Zinc (Zn)	2430	ND	ND	ND	100	46000

Element	Result (mg/kg)				Reporting Limit (mg/kg)	Limit (mg/kg)
	(17)#	(18)#	(19)#	(20)#		
Aluminium (Al)	ND	ND	ND	ND	300	28130
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	17
Chromium (III) (Cr III) ++	ND	ND	ND	ND	10	460
Chromium (VI) (Cr VI) ++	ND	ND	ND	ND	0.025	0.053
Cobalt (Co)	ND	ND	ND	ND	10	130
Copper (Cu)	ND	ND	ND	ND	10	7700
Lead (Pb)	ND	ND	ND	ND	10	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	2.5	180000
Organic tin ++	ND	ND	ND	ND	5	12
Zinc (Zn)	ND	ND	224	ND	100	46000

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宁波市高新区凌云路 1177 号凌云产业园 6 号楼 5 层 315000

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Element	Result (mg/kg)				Reporting Limit (mg/kg)	Limit (mg/kg)
	(21)#	(22)	(23)#	(24)#		
Aluminium (Al)	ND	ND	ND	ND	300	28130
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	17
Chromium (III) (Cr III) ++	ND	ND	ND	ND	10	460
Chromium (VI) (Cr VI) ++	ND	ND	ND	ND	0.025	0.053
Cobalt (Co)	ND	ND	ND	ND	10	130
Copper (Cu)	ND	ND	ND	ND	10	7700
Lead (Pb)	ND	ND	ND	ND	10	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	2.5	180000
Organic tin ++	ND	ND	ND	ND	5	12
Zinc (Zn)	ND	ND	1084	ND	100	46000

Element	Result (mg/kg)			Reporting Limit (mg/kg)	Limit (mg/kg)
	(25)#	(26)#	(27)#		
Aluminium (Al)	ND	ND	ND	300	28130
Antimony (Sb)	ND	ND	ND	10	560
Arsenic (As)	ND	ND	ND	10	47
Barium (Ba)	ND	ND	ND	10	18750
Boron (B)	ND	ND	ND	50	15000
Cadmium (Cd)	ND	ND	ND	5	17
Chromium (III) (Cr III) ++	ND	ND	ND	10	460
Chromium (VI) (Cr VI) ++	ND	ND	ND	0.025	0.053
Cobalt (Co)	ND	ND	ND	10	130
Copper (Cu)	ND	ND	ND	10	7700
Lead (Pb)	ND	ND	ND	10	23
Manganese (Mn)	ND	ND	46	10	15000
Mercury (Hg)	ND	ND	ND	10	94
Nickel (Ni)	ND	ND	ND	10	930
Selenium (Se)	ND	ND	ND	10	460
Strontium (Sr)	ND	ND	ND	100	56000
Tin (Sn)	ND	ND	ND	2.5	180000
Organic tin ++	ND	ND	ND	5	12
Zinc (Zn)	177	ND	ND	100	46000

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Remark : mg/kg = milligram per kilogram
++ = Unless the test results were marked with "#" or "∆", Chromium (III) & Chromium (VI) and Organic tin contents were not directly determined and were derived from migration results of total chromium and tin respectively.
- Organic tin test result was expressed as tributyl tin.
ND = Not detected (less than reporting limit)

= Confirmation of Chromium (VI) test was performed on the tested component. And the reported value of migration of Chromium (III) = migration value of total Chromium – migration value of Chromium(VI).

∆ = Confirmation test was performed on the tested component. The reported value was the sum of the migration values of Dimethyl tin, Methyl tin, Butyl tin, Dibutyl tin, Tributyl tin, Tetrabutyl tin, n-Octyl tin, Di-n-octyl tin, Di-n-propyl tin, Diphenyl tin and Triphenyl tin after converted to Tributyl tin by calculation. Other Organic tin compounds may be also be present in sample as stated in EN 71-3:2019+A1:2021.

Tested component(s)：See component list in the last section of this report
Remark： As Requested By Client, The Test Components (3 Red coating on wood(E0407/E0413).(4) Orange coating on wood(E0407/E0413)..(5) Yellow coating on wood(E0407/E0411/E0413)(6) Light green coating on wood(E0407/E0411/E0413). (7) blue coating on wood(E0407/E0411/E0413). (8) Purple coating on wood(E0407/E0413).(9) Black coating on wood(E0407/E0413/E0411).(16) Pink coating on wood(E0411).（20）Dark grey coating on wood(elephant,E0413 was Not Conducted In This Report. Client Claimed These Components Have Been Tested In Our Test Report SHAH01435501 Dated 2022.3.10

(B) Categories of various toy materials

Category I：Dry, brittle, powder like or pliable

Solid toy material from which powder-like material is released during playing and semi-solid materials that may also leave residues on the hands during play. The material can be ingested. Contamination of the hands with the material may contribute to the oral exposure of the material. (e.g. the cores of colouring pencils, chalk, crayons, modelling clays and plaster).

Category II：Liquid or sticky

Fluid or viscous toy material, which can be ingested or to which dermal exposure may occur during playing. (e.g. liquid paints, finger paints, liquid ink in pens, glue sticks, slimes, bubble solution).

Category III：Scraped-off

Solid toy material with or without a coating, which can be ingested as a result of biting, tooth scraping, sucking or licking. (e.g. coatings, lacquers, plastics, paper, textiles, glass, ceramic, metallic, wooden, bone, leather and other materials).

Date Sample Received：20 Apr, 2022
Testing Period：20 Apr, 2022 To 8 Jun, 2022

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To be continued

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Components:

(1) Transparent varnish on wood(E0407/E0413/E0411).
(2) Brown coating on wood(E0407/E0413/E0411).
(3) Rose red coating on wood(E0407/E0413).
(4) Orange coating on wood(E0407/E0413).
(5) Yellow coating on wood(E0407/E0411/E0413).
(6) Light green coating on wood(E0407/E0411/E0413).
(7) blue coating on wood(E0407/E0411/E0413).
(8) Purple coating on wood(E0407/E0413).
(9) Black coating on wood(E0407/E0413/E0411).
(10) Sky blue coating on wood(E0411/E0413).
(11) Navy blue coating on wood(E0411).
(12) Dark orange coating on wood(E0411).
(13) Pale green coating on wood(E0411).
(14) Dark green coating on wood(E0411).
(15) Pale pink coating on wood(E0411).
(16) Pink coating on wood(E0411).
(17) Hot pink coating on wood(E0411).
(18) White coating on wood(E0413).
(19) Light grey coating on wood(elephant, E0413).
(20) Dark grey coating on wood(elephant,E0413).
(21) Cream PA plastic(pole, E0411).
(22) Transparent PC plastic(sheet, E0407).
(23) White rubber(elastic string, E0407/E0411).
(24) Red thread(elastic string, E0407).
(25) White thread(elastic string, E0411).
(26) Natural color plywood.
(27) Natural color solid wood.

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End of report

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