

Test Report

Number: SHAH01602442S1

Applicant:

Date: Nov 21, 2023

NINGBO BEST SWING COMPANY LIMITED
NO.28, JINGANG ROAD, SOUTH BINHAI NEW
ZONE, LIYANG TOWN, NINGHAI COUNTY,
ZHEJIANG PROVINCE, CHINA

Attn: KATHERINE

*THIS IS TO SUPERSEDE REPORT
NO. SHAH01602442 DATED 17 Nov,
2023*

Sample Description:

One (1) group of submitted sample said to be :

Item Name : Wooden swing set with swings
Item No. : S04-644/344-070V00RD
Quantity : 1
Labelled Age Group : 18 months+
Packaging Provided By Applicant : No

Tests Conducted:

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

Conclusion:

<u>Tested Sample</u>	<u>Standard</u>	<u>Result</u>
Tested component(s) of submitted sample(s)	EN 71-3:2019+A1:2021 on migration of certain elements	Pass
Submitted sample	EN71-8: 2018 Safety Of Toys - Activity Toys For Domestic Use	Pass
Submitted sample	EN71-2: 2020 Flammability Test	Pass
Submitted sample	EN71-1: 2014+ A1: 2018 for Mechanical And Physical Properties	Pass
Submitted Sample	U.S. ASTM F963-23 Physical and Mechanical Tests.	Pass
Submitted Sample	U.S. ASTM F963-23 Flammability Test of Materials other than Textile Materials	Pass
Tested Components of Submitted Sample	U.S. ASTM F963-17 for total Lead content in surface coating	Pass

To be continued

Authorized By:
Intertek Testing Services Ltd. Zhejiang



Bobo Yao
Assistant General Manager



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<u>Tested Sample</u>	<u>Standard</u>	<u>Result</u>
Tested Components of Submitted Sample	U.S. ASTM F963-17 for total Lead content in non-surface coating materials	Pass
Tested components of submitted sample	U.S. ASTM F963-17 on soluble heavy elements test	Pass
Composite tested component(s) and tested component(s) of submitted sample(s) / set(s)	U.S. Consumer Product Safety Improvement Act 2008 title I, section 101 for total Lead content in surface coating	Pass
Tested Component of Submitted Sample	US Consumer Product Safety Improvement Act 2008 Title I, Sec 108(a) & (b)(3) and US 16 CFR Part 1307 for Prohibition of Children's Toys and Child Care Articles Containing Specified Phthalates	Pass
Composite tested component(s) and tested component(s) of submitted sample(s)/ set(s)	U.S. Consumer Product Safety Improvement Act 2008 title I, section 101 for total Lead content in non-surface coating materials (substrate)	Pass
Submitted Sample	EN IEC 62115:2020+A11:2020 Safety of Electric Toys	Pass
Screened components of Submitted Sample	Restriction of the use of certain hazardous substance in electrical and electronic equipment(RoHS Directive 2011/65/EU and (EU) 2015/863)	Pass

Note: the tested samples passed EN71-3 requirements for organic tin, however other organic tin compounds may also be present in the samples. The Toy Safety Directive (2009/48/EC) requirement covers total migratable organic tin.

To be continued

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Tests Conducted

1. 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)	(4)	(5)	(6)		
Aluminium (Al)	ND	3689	ND	ND	ND	300	28130
Antimony (Sb)	ND	ND	ND	ND	ND	10	560
Arsenic (As)	ND	ND	ND	ND	ND	10	47
Barium (Ba)	ND	36	ND	ND	ND	10	18750
Boron (B)	ND	ND	ND	ND	ND	50	15000
Cadmium (Cd)	ND	ND	ND	ND	ND	5	17
Chromium (III) (Cr III)	ND	ND	ND	ND	ND	10	460
Chromium (VI) (Cr VI)	ND	ND	ND	ND	ND	0.025	0.053
Cobalt (Co)	ND	ND	ND	ND	ND	10	130
Copper (Cu)	ND	ND	ND	ND	ND	10	7700
Lead (Pb)	ND	ND	ND	ND	ND	10	23
Manganese (Mn)	ND	ND	ND	ND	ND	10	15000
Mercury (Hg)	ND	ND	ND	ND	ND	10	94
Nickel (Ni)	ND	ND	ND	ND	ND	10	930
Selenium (Se)	ND	ND	ND	ND	ND	10	460
Strontium (Sr)	ND	ND	ND	ND	ND	100	56000
Tin (Sn)	ND	ND	ND	ND	ND	2.5	180000
Organic tin **	ND	ND	ND	ND	ND	5	12
Zinc (Zn)	ND	ND	ND	ND	ND	100	46000

Element	Result (mg/kg)						Reporting Limit (mg/kg)	Limit (mg/kg)
	(7)	(8)	(9)	(10)	(11)	(12)		
Aluminium (Al)	ND	ND	ND	ND	ND	ND	300	28130
Antimony (Sb)	ND	ND	ND	ND	ND	ND	10	560
Arsenic (As)	ND	ND	ND	ND	ND	ND	10	47
Barium (Ba)	ND	ND	ND	ND	ND	ND	10	18750
Boron (B)	ND	ND	ND	ND	ND	ND	50	15000
Cadmium (Cd)	ND	ND	ND	ND	ND	ND	5	17
Chromium (III) (Cr III)	ND	ND	ND	ND	ND	ND	10	460
Chromium (VI) (Cr VI)	ND	ND	ND	ND	ND	ND	0.025	0.053
Cobalt (Co)	ND	ND	ND	ND	ND	ND	10	130
Copper (Cu)	ND	ND	ND	ND	ND	ND	10	7700
Lead (Pb)	ND	ND	ND	ND	ND	ND	10	23
Manganese (Mn)	ND	ND	ND	ND	ND	ND	10	15000
Mercury (Hg)	ND	ND	ND	ND	ND	ND	10	94
Nickel (Ni)	ND	ND	ND	ND	ND	ND	10	930
Selenium (Se)	ND	ND	ND	ND	ND	ND	10	460
Strontium (Sr)	ND	ND	ND	ND	ND	ND	100	56000



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Tin (Sn)	ND	ND	ND	ND	ND	ND	2.5	180000
Organic tin **	ND	ND	ND	ND	ND	ND	5	12
Zinc (Zn)	ND	ND	ND	ND	ND	ND	100	46000

Element	Result (mg/kg)						Reporting Limit (mg/kg)	Limit (mg/kg)
	(13)	(14)	(15)	(16)	(17)	(18)		
Aluminium (Al)	ND	ND	ND	ND	ND	ND	300	28130
Antimony (Sb)	ND	ND	ND	ND	ND	ND	10	560
Arsenic (As)	ND	ND	ND	ND	ND	ND	10	47
Barium (Ba)	ND	ND	ND	ND	ND	ND	10	18750
Boron (B)	ND	ND	ND	ND	ND	ND	50	15000
Cadmium (Cd)	ND	ND	ND	ND	ND	ND	5	17
Chromium (III) (Cr III)	ND	ND	ND	ND	ND	ND	10	460
Chromium (VI) (Cr VI)	ND	ND	ND	ND	ND	ND	0.025	0.053
Cobalt (Co)	ND	ND	ND	ND	ND	ND	10	130
Copper (Cu)	ND	ND	ND	ND	ND	ND	10	7700
Lead (Pb)	ND	ND	ND	ND	ND	ND	10	23
Manganese (Mn)	ND	ND	ND	ND	ND	ND	10	15000
Mercury (Hg)	ND	ND	ND	ND	ND	ND	10	94
Nickel (Ni)	ND	ND	ND	ND	ND	ND	10	930
Selenium (Se)	ND	ND	ND	ND	ND	ND	10	460
Strontium (Sr)	ND	ND	ND	ND	ND	ND	100	56000
Tin (Sn)	ND	ND	ND	ND	ND	ND	2.5	180000
Organic tin **	ND	ND	ND	ND	ND	ND	5	12
Zinc (Zn)	ND	ND	ND	ND	ND	ND	100	46000

Element	Result (mg/kg)				Reporting Limit (mg/kg)	Limit (mg/kg)
	(19)	(20)	(21)	(22)		
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	18	13	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	73	ND	10	7700
Lead (Pb)	ND	ND	ND	ND	10	23
Manganese (Mn)	ND	ND	23	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)
	(3)		
Aluminium (Al)	ND	300	28130
Antimony (Sb)	ND	10	560
Arsenic (As)	ND	10	47
Barium (Ba)	556	10	18750
Boron (B)	ND	50	15000
Cadmium (Cd)	ND	5	17
Chromium (III) (Cr III)	ND	10	460
Chromium (VI) (Cr VI)	ND	0.025	0.053
Cobalt (Co)	ND	10	130
Copper (Cu)	ND	10	7700
Lead (Pb)	ND	10	23
Manganese (Mn)	ND	10	15000
Mercury (Hg)	ND	10	94
Nickel (Ni)	ND	10	930
Selenium (Se)	ND	10	460
Strontium (Sr)	ND	100	56000
Tin (Sn)	8.0	2.5	180000
Organic tin **	ND Δ	5	12
Zinc (Zn)	ND	100	46000

Remark :

++ = Unless the test results were marked with "#" or " Δ ", Chromium (III) & Chromium (VI) and Organic tin contents were not directly determined and were derived from migration results of total chromium and tin respectively.
ND = Not detected (less than reporting limit)

@=The sample was applied by client for second time.The result was valid for this item only.

Δ = Confirmation test was performed on the tested component. The reported value was calculated by summation of the migration values of Methyl tin,Dimethyltin, Dibutyl tin, Tributyl tin, Tetrabutyl tin, n-Octyl tin, Di-n-octyl tin, Di-n-propyl tin, Diphenyl tin, Monobutyl tin, Triphenyl tin Trimethyl tin, Tri-n-octyl tin and Tri-cyclohexyl tin.

Tested component(s): See component list in the last section of this report / See W/S

(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



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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: Aug 16, 2023

Testing Period: Aug 16, 2023 to Oct 23, 2023

2. Safety Requirement For Activity Toy

Test Standard: EN71-8: 2018 Safety Of Toys - Part 8: Activity Toys For Domestic Use.

Applicant's Specified

- Age Group For Testing: For ages 18 months and up.
- Maximum Total Weight: 70 kg

Number Of Samples Tested: One (1) Set.

Clause	Requirement	Result
4.1	General	
4.1.1	Assembly	P
4.1.2	Static Strength	P
4.1.3	Maximum Height	P
4.1.4	Corners And Edges	P
4.1.5	Protruding Parts	P
4.1.6	Diameter Of Ropes And Other Means Of Suspension	P
4.1.7	Water Accumulation	P
4.2	Barriers, Handrails And Ladders And Similar Means Of Access To Activity Toys	
4.2.1	Barriers And Handrails Preventing A Child From Falling Down	NA
4.2.2	Ladders And Similar Means Of Access To Activity Toys	NA
4.3	Entrapment	
4.3.1	Entrapment Of Head And Neck	P
4.3.2	Entrapment Of Clothing And Hair	P
4.3.3	Entrapment Of Feet	P
4.3.4	Entrapment Of Fingers	P
4.4	Stability Of Activity Toys Other Than Slides, Swings And Activity Toys With crossbeams, And See-Saws	
4.4.1	General	NA
4.4.2	Stability Of Activity Toys With A Free Height Of Fall Of 600 mm Or Less	NA
4.4.3	Stability Of Activity Toys With A Free Height Of Fall Of More Than 600 mm	NA
4.5	Slides	
4.5.1	General	NA
4.5.2	Stability Of Slides	P
4.5.3	Retaining Sides Of Slides	P
4.5.4	Starting, Sliding And Run-Out Sections On Slides	P
4.6	Swings	
4.6.1	Stability Of Swings And Other Activity Toys With Crossbeams	P
4.6.2	Static Strength Of Crossbeams, Swing Devices And Suspension Connectors	P
4.6.3	Swings Intended For Children Under 36 Months	P
4.6.4	Minimum Clearance Between Adjacent Swing Elements, And Adjacent Structures	P
4.6.5	Lateral Stability Of Swing Elements	P
4.6.6	Minimum Clearance Between Swing Elements And The Ground	P
4.6.7	Suspension Connectors And Swing Devices	P
4.6.8	Impact, Geometry And Design Of Swing Elements	P
4.7	See-saws	NA
4.7.1	Stability Of See-saws	NA



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4.7.2	Seat/Stand Height	NA
4.7.3	Restraint Of Motion	NA
4.7.4	Pinching And Crushing Fingers And Toes	NA
4.7.5	Hand Supports	NA
4.8	Carousels And Rocking Activity Toys	NA
4.9	Paddling Pools	
4.9.1	Static Strength Of Paddling Pools With Non-Inflatable Walls	NA
4.9.2	Paddling Pools With Inflatable Walls	NA
5	Warnings, Markings, And Instructions	
5.1.1	General	P
5.1.2	Paddling Pools	NA
5.2	Assembly And Installation Instructions	P
5.3	Maintenance	P

Abbreviation: P = Pass; NA = Not Applicable;

Date Sample Received: Aug 16, 2023

Testing Period: Aug 16, 2023 to Nov 14, 2023

3. 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: Aug 16, 2023

Testing Period: Aug 16, 2023 to Nov 14, 2023

Test Report

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Tests Conducted
4. Mechanical and Physical Test

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

Applicant's Specified Age Group for Testing: For ages 18 months and up.

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
Impact Test	8.7	1 kg
Compression Test	8.8	110 N

Clause	Testing Items	Assessment
4	General Requirements	
4.1	Material cleanliness	P
4.2	Assembly	P
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	NA
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
4.27	Flying toys	NA
5	Toys intended for Children under 36 Months	
5.1	General requirements	P



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Tests Conducted

Clause	Testing Items	Assessment
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	NA
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 teethingers	NA
7.13	Percussion caps specifically designed for use in toys	NA
7.14	Acoustics	P
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
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



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Tests Conducted

Clause	Testing Items	Assessment
7.26	Improvised projectiles	NA

Remark: P = Pass NA = Not Applicable

Artwork of packaging was provided for testing.

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

Date Sample Received: Aug 16, 2023

Testing Period: Aug 16, 2023 to Nov 14, 2023

5. Physical and Mechanical Tests

Test standard: ASTM Standard Consumer Safety Specification for Toy Safety F963-23.

Applicant's specified age group for testing: For ages 18 months and up.

The submitted samples were undergone the use and abuse tests in accordance with The Federal Hazardous Substances Act (FHSA), Title 16, Code of Federal Regulations:

Test	FHSA	Parameter
Torque test	Section 1500.53(e)	4 in-lbf
Tension test	Section 1500.53(f)	15 lbf
Compression test	Section 1500.53(g)	30 lbf

The submitted samples were undergone the tests in accordance with section 8.5 through section 8.16 and 8.20 through 8.30 on normal use, abuse and specific tests for different types of toys whichever is applicable.

Section	Requirement	Result
4.1	Material Quality (Visual check on cleanliness)	P
4.5	Sound-producing toys	P
4.6.1	Toys intended for children under 36 months (Small objects)	P



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Section	Requirement	Result
4.6.2	Mouth-actuated toys	NA
4.6.3	Toys and games for children at least 36 months but less than 72 months (Small part warning)	NA
4.7	Accessible edges	P
4.8	Projections	NA
4.9	Accessible points	P
4.10	Wires or rods	NA
4.11	Nails and fasteners	P
4.12	Plastic film	NA
4.13	Folding mechanisms and hinges	NA
4.14	Cords, straps, and elastics	P
4.15	Stability and over-load requirements	NA
4.16	Confined spaces	NA
4.17	Wheels, tires and axles	NA
4.18	Holes, clearance, and accessibility of mechanisms	NA
4.19	Simulated protective devices (such as helmets, hats and goggles)	NA
4.20	Pacifiers	NA
4.21	Projectile toys	NA
4.22	Teethers and teething toys	NA
4.23	Rattles	NA
4.24	Squeeze toys	NA
4.25	Battery-operated toys	P
4.26	Toys intended to be attached to a crib or playpen	NA
4.27	Stuffed and beanbag-type toys	NA
4.28	Stroller and carriage toys	NA
4.29	Art materials	NA
4.30	Toy gun marking	NA
4.31	Balloons	NA



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Section	Requirement	Result
4.32	Certain toys with nearly spherical ends	NA
4.33	Marbles	NA
4.34	Balls	NA
4.35	Pompoms	NA
4.36	Hemispheric-shaped objects	NA
4.37	Yoyo elastic tether toys	NA
4.38	Magnets	NA
4.39	Jaw entrapment in handles and steering wheels	NA
4.40	Expanding materials	NA
4.41	Toy chests	NA
5	Labelling requirement	P
6	Instructional literature	P
7	Producer's markings	
7.1	Name and Address of producer/distributor	Yes
7.2	Battery-Powered Ride-on Toy	NA
7.3	Toy chests	
7.3.1	Name and address of manufacturer/distributor/seller	NA
7.3.2	Code mark	NA

Abbreviation: P = Pass NA= Not Applicable

Date Sample Received: Aug 16, 2023

Testing Period: Aug 16, 2023 to Nov 16, 2023

6. Flammability Test

Test requirement: Section 4.2 of the ASTM Standard Consumer Safety Specification on Toy Safety F963-23, the sample was tested according to Annex A5 Flammability Testing Procedure for Solids and Soft Toys.

Result: Ignited but self-extinguished before burn rate could be determined.

Date Sample Received: Aug 16, 2023

Testing Period: Aug 16, 2023 to Nov 15, 2023



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7. Total Lead (Pb) Content for Surface Coating

As per section 4.3.5 of the ASTM standard consumer safety specification on toy safety F963-17, test method CPSC-CH-E1003-09.1 was/were used and total Lead content was determined by Inductively Coupled Argon Plasma Spectrometry.

Test Item	Result in ppm			Reporting Limit (ppm)	Limit (ppm)
	(1)	(2)	(3)		
Lead(Pb)	ND	ND	58	20	90

Remark: ppm = parts per million = mg/kg
ND= Not detected (Less than reporting limit)

Tested Components: See component list in the last section of this report.

Date Sample Received: Aug 16, 2023
Testing Period: Aug 16, 2023 to Oct 23, 2023

8. Total Lead (Pb) Content for Non-surface Coating

As per section 4.3.5 of the ASTM standard consumer safety specification on toy safety F963-17, test method CPSC-CH-E1001-08.3 or/and CPSC-CH-E1002-08.3, was/were used and total Lead content was determined by Inductively Coupled Argon Plasma Spectrometry.

Test Item	Result in ppm					Reporting Limit (ppm)	Limit (ppm)
	(4+5+6)	(7+8+9)	(10+11+12)	(13+14+15)	(16+17)		
Lead(Pb)	ND	ND	ND	ND	ND	20	100

Test Item	Result in ppm					Reporting Limit (ppm)	Limit (ppm)
	(18+19)	(20)	(23)	(24)	(25)		
Lead(Pb)	ND	ND	ND	ND	ND	20	100

Test Item	Result in ppm					Reporting Limit (ppm)	Limit (ppm)
	(26)	(27)	(28)	(29)	(30)		
Lead(Pb)	ND	ND	ND	ND	ND	20	100

Test Item	Result in ppm				Reporting Limit (ppm)	Limit (ppm)
	(31)	(32)	(33)	(34)		
Lead(Pb)	ND	ND	ND	ND	20	100

Remark: ppm = Parts per million = mg/kg
Detection Limit = 20 mg/kg
ND=Not Detected

Tested Components: See component list in the last section of this report.

Date Sample Received: Aug 16, 2023
Testing Period: Aug 16, 2023 to Sep 13, 2023



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9. Soluble Heavy Metal Elements Analysis

As per section 4.3.5.1(2) and 8.3.2 / 4.3.5.2(2)(b) and 8.3.5 of the ASTM standard consumer safety specification on toy safety F963-17, acid extraction method was used and heavy metal elements content were determined by Inductively Coupled Argon Plasma Spectrometry.

	Result (ppm)					Soluble Limit(ppm)
	(1)	(2)	(4)	(5)	(6)	
Sol. Barium(Ba)	<5	25#	<5	<5	<5	1000
Sol. Lead(Pb)	<5	<5	<5	<5	<5	90
Sol. Cadmium(Cd)	<5	<5	<5	<5	<5	75
Sol. Antimony(Sb)	<5	<5	<5	<5	<5	60
Sol. Selenium(Se)	<5	<5	<5	<5	<5	500
Sol. Chromium(Cr)	<5	<5	<5	<5	<5	60
Sol. Mercury(Hg)	<5	<5	<5	<5	<5	60
Sol. Arsenic(As)	<2.5	<2.5	<2.5	<2.5	<2.5	25

	Result (ppm)						Soluble Limit(ppm)
	(7)	(8)	(8)	(10)	(11)	(12)	
Sol. Barium(Ba)	<5	<5	<5	<5	<5	<5	1000
Sol. Lead(Pb)	<5	<5	<5	<5	<5	<5	90
Sol. Cadmium(Cd)	<5	<5	<5	<5	<5	<5	75
Sol. Antimony(Sb)	<5	<5	<5	<5	<5	<5	60
Sol. Selenium(Se)	<5	<5	<5	<5	<5	<5	500
Sol. Chromium(Cr)	<5	<5	<5	<5	<5	<5	60
Sol. Mercury(Hg)	<5	<5	<5	<5	<5	<5	60
Sol. Arsenic(As)	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	25

	Result (ppm)						Soluble Limit(ppm)
	(13)	(14)	(15)	(16)	(17)	(18)	
Sol. Barium(Ba)	<5	<5	<5	<5	<5	<5	1000
Sol. Lead(Pb)	<5	<5	<5	<5	<5	<5	90
Sol. Cadmium(Cd)	<5	<5	<5	<5	<5	<5	75
Sol. Antimony(Sb)	<5	<5	<5	<5	<5	<5	60
Sol. Selenium(Se)	<5	<5	<5	<5	<5	<5	500
Sol. Chromium(Cr)	<5	<5	<5	<5	<5	<5	60
Sol. Mercury(Hg)	<5	<5	<5	<5	<5	<5	60
Sol. Arsenic(As)	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	25

	Result (ppm)				Soluble Limit(ppm)
	(19)	(20)	(21)	(22)	
Sol. Barium(Ba)	<5	13#	<5#	<5	1000
Sol. Lead(Pb)	<5	<5	<5	<5	90
Sol. Cadmium(Cd)	<5	<5	<5	<5	75
Sol. Antimony(Sb)	<5	<5	<5	<5	60
Sol. Selenium(Se)	<5	<5	<5	<5	500
Sol. Chromium(Cr)	<5	<5	<5	<5	60
Sol. Mercury(Hg)	<5	<5	<5	<5	60
Sol. Arsenic(As)	<2.5	<2.5	<2.5	<2.5	25



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	Result (ppm)	Soluble Limit(ppm)
	(3)	
Sol. Barium(Ba)	389#	1000
Sol. Lead(Pb)	<5	90
Sol. Cadmium(Cd)	<5	75
Sol. Antimony(Sb)	<5	60
Sol. Selenium(Se)	<5	500
Sol. Chromium(Cr)	<5	60
Sol. Mercury(Hg)	<5	60
Sol. Arsenic(As)	<2.5	25

Remark: ppm = Parts per million = mg/kg

Sol. = Soluble

= The results were adjusted by subtracting analytical correction factor.

Tested components: See component list in the last section of this report

Date Sample Received: Aug 16, 2023

Testing Period: Aug 16, 2023 to Oct 23, 2023

10. Total Lead (Pb) Content in Surface Coating

As per standard operating procedure for determining Lead (Pb) in paint and other similar surface coatings (April 26, 2009), test method CPSC-CH-E1003-09.1 was used and total Lead content was determined by Inductively Coupled Argon Plasma Spectrometry.

Tested Component	Result (ppm)	Limit (ppm)
(1)	ND	90
(2)	ND	90
(3)	58	90

The limit was quoted according to U.S. Consumer Product Safety Improvement Act 2008 title I, section 101 for total Lead content in surface coating.

Remark: ppm = Parts per million = mg/kg

Detection Limit = 20 mg/kg

ND=Not Detected

Date Sample Received: Aug 16, 2023

Testing Period: Aug 16, 2023 to Oct 23, 2023

11. Phthalate Content

With reference to CPSC-CH-C1001-09.4, by Gas Chromatographic-Mass Spectrometric (GC-MS) analysis.

<u>Test item</u>	<u>Result (%)</u>					<u>Limit (%)</u> <u>(Max.)</u>
	(1)	(2)	(3)	(4+5+6)	(7+8+9)	
Dibutyl phthalate (DBP)	ND	ND	ND	ND	ND	0.1
Di-(2-ethylhexyl) phthalate (DEHP)	ND	ND	ND	ND	ND	0.1
Benzyl butyl phthalate (BBP)	ND	ND	ND	ND	ND	0.1



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Diisononyl phthalate (DINP)	ND	ND	ND	ND	ND	0.1
Diisobutyl phthalate (DIBP)	ND	ND	ND	ND	ND	0.1
Di-n-pentyl phthalate (DPENP)	ND	ND	ND	ND	ND	0.1
Di-n-hexyl phthalate (DHEXP)	ND	ND	ND	ND	ND	0.1
Dicyclohexyl phthalate (DCHP)	ND	ND	ND	ND	ND	0.1

<u>Test item</u>	<u>Result (%)</u>					<u>Limit (%)</u>
	(10+11+12)	(13+14+15)	(16+17)	(18+19)	(20)	(Max.)
Dibutyl phthalate (DBP)	ND	ND	ND	ND	ND	0.1
Di-(2-ethylhexyl) phthalate (DEHP)	ND	ND	ND	ND	ND	0.1
Benzyl butyl phthalate (BBP)	ND	ND	ND	ND	ND	0.1
Diisononyl phthalate (DINP)	ND	ND	ND	ND	ND	0.1
Diisobutyl phthalate (DIBP)	0.03	ND	ND	ND	ND	0.1
Di-n-pentyl phthalate (DPENP)	ND	ND	ND	ND	ND	0.1
Di-n-hexyl phthalate (DHEXP)	ND	ND	ND	ND	ND	0.1
Dicyclohexyl phthalate (DCHP)	ND	ND	ND	ND	ND	0.1

The above limit was quoted according to 16 CFR part 1307 approved by U.S. Consumer Product Safety Commission (CPSC) for prohibition of children's toys and child care articles containing specified phthalates.

Remark: ND = Not Detected
Detection Limit = 0.01%

Tested Component(s): See component list in the last section of this report.

Date Sample Received: Aug 16, 2023
Testing Period: Aug 16, 2023 to Oct 20, 2023

12. Total Lead (Pb) Content In Non-Surface Coating Materials (Substrate)

As per standard operating procedures for determining total Lead (Pb) in children's products, test method(s) CPSC-CH-E1002-08.3 and/or CPSC-CH-E1001-08.3 was/were used and total Lead content was determined by Inductively Coupled Argon Plasma Spectrometry.

Tested Component	Result (ppm)	Limit (ppm)
(4+5+6)	ND	100
(7+8+9)	ND	100
(10+11+12)	ND	100
(13+14+15)	ND	100
(16+17)	ND	100
(18+19)	ND	100
(20)	ND	100
(23)	ND	100
(24)	ND	100
(25)	ND	100
(26)	ND	100
(27)	ND	100
(28)	ND	100
(29)	ND	100
(30)	ND	100



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Tests Conducted		
Tested Component	Result (ppm)	Limit (ppm)
(31)	ND	100
(32)	ND	100
(33)	ND	100
(34)	ND	100

The limit was quoted according to U.S. Consumer Product Safety Improvement Act 2008 title I, section 101 for total Lead content in non-surface coating materials (substrate).

Remark: ppm = Parts per million = mg/kg

Detection Limit = 20 mg/kg

ND=Not Detected

Tested Components: See component list in the last section of this report.

Date Sample Received: Aug 16, 2023

Testing Period: Aug 16, 2023 to Sep 15, 2023

13. Safety of Electric Toys

As per European Standard on Safety of Electric Toys EN IEC 62115:2020+A11:2020

Applicant's Specified Age Group for Testing: For ages 18 months and up.

Battery Type: 1.5 V, AA size x 2 pcs

Normal Use Operation: sound

Clause	Requirement	Assessment
1	Scope	--
2	Normative reference	--
3	Term and definitions	--
4	General requirement	--
5	General conditions for test	--
6	Criteria for reduced testing	NA
6.1	General	--
6.2	Short-circuit resistance	NA
6.3	Low power electric toys	NA
6.4	Battery circuits	NA
7	Marking and instructions	P
7.1	General	See remark(1)
7.2	Marking on electric toys	P
7.2.1	Identification	See remark(2)
7.2.2	Electric toys with replaceable batteries	P
7.2.3	Transformer toys and power supply toys	NA
7.2.4	Electric toys with more than one power supply	NA
7.2.5	Electric toys with detachable lamps	NA
7.2.6	Symbols	P
7.2.7	Durability	P
7.3	Instructions and markings on packaging	P
7.3.1	General	P
7.3.2	Transformer toys and power supply toys	NA
7.3.3	Electric toys that are used with replaceable batteries	P
7.3.3.1	General	P
7.3.3.2	Coin batteries	NA



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Clause	Requirement	Assessment
7.3.3.3	Button batteries	NA
7.4	Instructions for electric toys that can be connected to class I equipment	NA
7.5	Instructions for ride-on electric toys	NA
7.6	Temperature warnings	NA
8	Power input	NA
9	Heating and abnormal operation	P
9.1	General	P
9.2	Test condition	--
9.3	Normal operation	P
9.4	Normal operation with insulation short-circuited	P
9.5	Abnormal operation with temperature controls made inoperable	NA
9.6	With accessible moving parts locked	NA
9.7	Additional transformers and power supplies	NA
9.8	Abnormal supply to electric toys via a USB connection.	NA
9.9	Fault condition in electronic circuits	NA
9.10	Compliance criteria	NA
10	Electric strength	P
10.1	Electric strength at operating temperature	P
10.2	Electric strength under humid conditions	P
11	Electric toys used in water, electric toys used with liquid and electric toys cleaned with liquid	NA
12	Mechanical strength	P
12.1	Enclosures	P
12.2	Attachment strength	NA
13	Construction	P
13.1	Nominal supply voltage	P
13.2	Transformers, power supplies and battery chargers	NA
13.3	Thermal cut-outs.	NA
13.4	Batteries	P
13.4.1	Small batteries	NA
13.4.2	Other batteries	P
13.4.3	Electrolyte leakage	NA
13.4.4	Electric toys placed above a child	NA
13.4.5	Parallel connection of batteries	P
13.4.6	Battery compartment fasteners	P
13.5	Plug and sockets	NA
13.6	Charging batteries	NA
13.7	Series motors	NA
13.8	Working voltage	NA
13.9	Electric toys connecting to other equipment.	NA
13.10	Speed limitation of ride-on electric toys	NA
14	Protection of cords and wires	P
14.1	Edges and moving parts	P
14.2	Fixed parts	NA
15	Components	--
15.1.1	General	See remark(3)
15.1.2	Switches and automatic controls	NA
15.1.3	Other components	See remark(3)
15.2	Prohibited components	P
15.3	Transformers and power supplies	NA
15.4	Battery chargers	NA
15.5	Batteries	NA
16	Screws and connections	P
16.1	Fixings	P
16.2	Connections	NA



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Clause	Requirement	Assessment
17	Clearances and creepage distances	P
18	Resistance to heat and fire	P
18.1	Resistance to heat	NA
18.2	Resistance to fire	P
18.2.1	General	P
18.2.2	Non-metallic parts	P
18.2.3	Insulating material	NA
19	Radiation and similar hazards	NA
19.1	General	NA
19.2	Optical radiation Toys incorporating lasers and or light emitting diodes (LED) or UV emitting lamps shall comply with Annex E. Electric toys incorporating LEDs shall comply with 19.E.2. Electric toys incorporating lasers shall comply with 19.E.3 Electric toys incorporating UV-emitting lamps shall comply with 19.E.4	NA
19.3	Other electromagnetic radiation Electric toys with an integrated field source that may produce harmful electromagnetic radiation Measurements methods are given in Annex I.	NA
Annex A	Experimental sets	NA
Annex B	Needle-flame test	NA
Annex C	Automatic controls and switches	NA
Annex D	Electric toys with protective electronic circuits	NA
Annex E	Safety of electric toys incorporating optical radiation sources	NA
Annex F	Flowcharts showing the assessment of optical radiation safety of LEDs in electric toys	--
Annex G	Examples of calculations on LEDs	--
Annex H	Explanation of the principles used for the requirements of Annex E	--
Annex I	Electric toys generating electromagnetic fields (EMF)	NA
Annex J	Safety of remote controls for electric ride-on toys	NA
Annex K	Flow charts showing the application of Clause 9	--

Abbreviation: P = Pass NA = Not Applicable

Remark:

- (1) Only the English version of the marking and instructions were assessed. According to the standard, instruction sheets and other texts required by the standard shall be written in the official language of the country in which the product is to be sold.
- (2) Below are additional information according to the requirement in Toy Safety Directive 2009/48/EC relating to marking of toys and do not constitute requirements of this European Standard:
The manufacturer's and importer's name, registered trade name or registered trade mark, the address and type, batch, serial or model number or other element allowing their identification shall be indicated on the toy or, where that is not possible, on its packaging or in a document accompanying the toy.
After checking, it was found that:

	Toy	Packaging
Manufacturer's name	Absent	Present
Manufacturer's address	Absent	Present
Importer's name	Absent	Present
Importer's address	Absent	Present
Product identification code	Absent	Present

- (3) Components shall comply with the safety requirements specified in the relevant IEC standards as far as they reasonably apply.



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Date Sample Received: Aug 16, 2023
Testing Period: Aug 16, 2023 to Oct 26, 2023

14. Certain Hazardous Substance in Electrical and Electronic Equipment

Cadmium (Cd), Lead (Pb), Mercury (Hg), Chromium (Cr) and bromine (Br) content were measured with reference to IEC 62321-3-1 Edition 1.0:2013 by XRF spectroscopy and chemical confirmation test for RoHS restricted substances. And Polybrominated Biphenyls (PBBs), Polybrominated Diphenyl Ethers (PBDEs) and Phthalates content were determined by Gas Chromatographic-Mass Spectrometric (GC-MS).

(A) Results:

Part No.	Screened COMPONENTS	REFER INFORMATION	ITEMS	XRF RESULTS	Screened RESULTS (PHTHALATES)	CHEMICAL CONFIRMATION RESULT (MG/KG)	CONCLUSION ON ROHS
1	SHEEL (GREEN PLASTIC)	/	Cd	P	NA	/	PASS
			Pb	P		/	
			Hg	P		/	
			Cr	P		/	
			Br	P		/	
			DEHP	NA	P	/	
			BBP	NA	P	/	
			DBP	NA	P	/	
			DIBP	NA	P	/	
2	ROD (GREEN PLASTIC)	/	Cd	P	NA	/	PASS
			Pb	P		/	
			Hg	P		/	
			Cr	P		/	
			Br	P		/	
			DEHP	NA	P	/	
			BBP	NA	P	/	
			DBP	NA	P	/	
			DIBP	NA	P	/	
3	BUTTON (ORANGE NONMETAL)	/	Cd	P	NA	/	PASS
			Pb	P		/	
			Hg	P		/	
			Cr	P		/	
			Br	P		/	



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Part No.	Screened COMPONENTS	REFER INFORMATI ON	ITEMS	XRF RESUL TS	Screened RESULTS (PHTHALAT ES)	CHEMICAL CONFIRMATION RESULT (MG/KG)	CONCLUSIO N ON ROHS
			DEHP	NA	P	/	
			BBP	NA	P	/	
			DBP	NA	P	/	
			DIBP	NA	P	/	
4	TRUMPET (PINK PLASTIC)	/	Cd	P	NA	/	PASS
			Pb	P		/	
			Hg	P		/	
			Cr	P		/	
			Br	P		/	
			DEHP	NA	P	/	
			BBP	NA	P	/	
			DBP	NA	P	/	
			DIBP	NA	P	/	
5	SCREW (SILVER METAL)	/	Cd	P	NA	/	PASS
			Pb	P		/	
			Hg	P		/	
			Cr	P		/	
			Br	NA		/	
			DEHP	NA	NA	/	
			BBP	NA	NA	/	
			DBP	NA	NA	/	
			DIBP	NA	NA	/	
6	SCREW (SILVER METAL)	/	Cd	P	NA	/	PASS
			Pb	P		/	
			Hg	P		/	
			Cr	P		/	
			Br	NA		/	
			DEHP	NA	NA	/	
			BBP	NA	NA	/	
			DBP	NA	NA	/	
			DIBP	NA	NA	/	



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Part No.	Screened COMPONENTS	REFER INFORMATI ON	ITEMS	XRF RESUL TS	Screened RESULTS (PHTHALAT ES)	CHEMICAL CONFIRMATION RESULT (MG/KG)	CONCLUSIO N ON ROHS
7	BACK COVER (GREEN PLASTIC)	/	Cd	P	NA	/	PASS
			Pb	P		/	
			Hg	P		/	
			Cr	P		/	
			Br	P		/	
			DEHP	NA	P	/	
			BBP	NA	P	/	
			DBP	NA	P	/	
			DIBP	NA	P	/	
8	SEALING RING (CLEAR NONMETAL)	/	Cd	P	NA	/	PASS
			Pb	P		/	
			Hg	P		/	
			Cr	P		/	
			Br	P		/	
			DEHP	NA	P	/	
			BBP	NA	P	/	
			DBP	NA	P	/	
			DIBP	NA	P	/	
9	CONTACT PLATE						
9-1	SPRING (SILVER METAL)	/	Cd	P	NA	/	PASS
			Pb	P		/	
			Hg	P		/	
			Cr	P		/	
			Br	NA		/	
			DEHP	NA	NA	/	
			BBP	NA	NA	/	
			DBP	NA	NA	/	
			DIBP	NA	NA	/	
9-2	CONNECTING SHEET (SILVER METAL)	/	Cd	P	NA	/	PASS
			Pb	P		/	
			Hg	P		/	



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Part No.	Screened COMPONENTS	REFER INFORMATION	ITEMS	XRF RESULTS	Screened RESULTS (PHTHALATES)	CHEMICAL CONFIRMATION RESULT (MG/KG)	CONCLUSION ON ROHS
			Cr	P		/	
			Br	NA		/	
			DEHP	NA	NA	/	
			BBP	NA	NA	/	
			DBP	NA	NA	/	
			DIBP	NA	NA	/	
10	LOUDSPEAKER						
10-1	SOLDER (SILVER METAL)	/	Cd	P	NA	/	PASS
			Pb	X		/	
			Hg	P		/	
			Cr	P		/	
			Br	NA		/	
			DEHP	NA	NA	/	
			BBP	NA	NA	/	
			DBP	NA	NA	/	
			DIBP	NA	NA	/	
10-2	PCB	/	Cd	P	NA	/	PASS
			Pb	P		/	
			Hg	P		/	
			Cr	P		/	
			Br	P		/	
			DEHP	NA	P	/	
			BBP	NA	P	/	
			DBP	NA	P	/	
			DIBP	NA	P	/	
10-3	FRAME (GREEN PLASTIC)	/	Cd	P	NA	/	PASS
			Pb	P		/	
			Hg	P		/	
			Cr	P		/	
			Br	P		/	
			DEHP	NA	P	/	



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Part No.	Screened COMPONENTS	REFER INFORMATI ON	ITEMS	XRF RESUL TS	Screened RESULTS (PHTHALAT ES)	CHEMICAL CONFIRMATION RESULT (MG/KG)	CONCLUSIO N ON ROHS
			BBP	NA	P	/	
			DBP	NA	P	/	
			DIBP	NA	P	/	
10-4	MAGNET (BLACK METAL)	/	Cd	P	NA	/	PASS
			Pb	P		/	
			Hg	P		/	
			Cr	P		/	
			Br	NA		/	
			DEHP	NA	NA	/	
			BBP	NA	NA	/	
			DBP	NA	NA	/	
			DIBP	NA	NA	/	
10-5	COVER (SILVER METAL)	/	Cd	P	NA	/	PASS
			Pb	P		/	
			Hg	P		/	
			Cr	P		/	
			Br	NA		/	
			DEHP	NA	NA	/	
			BBP	NA	NA	/	
			DBP	NA	NA	/	
			DIBP	NA	NA	/	
10-6	COVER (SILVER METAL)	/	Cd	P	NA	/	PASS
			Pb	P		/	
			Hg	P		/	
			Cr	P		/	
			Br	NA		/	
			DEHP	NA	NA	/	
			BBP	NA	NA	/	
			DBP	NA	NA	/	
			DIBP	NA	NA	/	
10-7	WIRE	/	Cd	P	NA	/	PASS



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Tests Conducted

Part No.	Screened COMPONENTS	REFER INFORMATI ON	ITEMS	XRF RESUL TS	Screened RESULTS (PHTHALAT ES)	CHEMICAL CONFIRMATION RESULT (MG/KG)	CONCLUSIO N ON ROHS
	(COPPER METAL)		Pb	P		/	
			Hg	P		/	
			Cr	P		/	
			Br	NA		/	
			DEHP	NA	NA	/	
			BBP	NA	NA	/	
			DBP	NA	NA	/	
			DIBP	NA	NA	/	
10-8	FILM (CLEAR NONMETAL)	/	Cd	P	NA	/	PASS
			Pb	P		/	
			Hg	P		/	
			Cr	P		/	
			Br	P		/	
			DEHP	NA	P	/	
			BBP	NA	P	/	
			DBP	NA	P	/	
	SEALING RING (CLEAR NONMETAL)	/	Cd	P	NA	/	PASS
			Pb	P		/	
			Hg	P		/	
			Cr	P		/	
			Br	P		/	
			DEHP	NA	P	/	
			BBP	NA	P	/	
			DBP	NA	P	/	
12	SCREW (SILVER METAL)	/	Cd	P	NA	/	PASS
			Pb	P		/	
			Hg	P		/	
			Cr	P		/	
			Br	NA		/	



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Part No.	Screened COMPONENTS	REFER INFORMATION	ITEMS	XRF RESULTS	Screened RESULTS (PHTHALATES)	CHEMICAL CONFIRMATION RESULT (MG/KG)	CONCLUSION ON ROHS
			DEHP	NA	NA	/	
			BBP	NA	NA	/	
			DBP	NA	NA	/	
			DIBP	NA	NA	/	
13	PCB ASSY						
13-1	WIRE (COPPER METAL)	/	Cd	P	NA	/	PASS
			Pb	P		/	
			Hg	P		/	
			Cr	P		/	
			Br	NA		/	
			DEHP	NA	NA	/	
			BBP	NA	NA	/	
			DBP	NA	NA	/	
			DIBP	NA	NA	/	
13-2	WIRE JACKET (YELLOW NONMETAL)	/	Cd	P	NA	/	PASS
			Pb	P		/	
			Hg	P		/	
			Cr	P		/	
			Br	P		/	
			DEHP	NA	P	/	
			BBP	NA	P	/	
			DBP	NA	P	/	
			DIBP	NA	P	/	
13-3	WIRE JACKET (RED NONMETAL)	/	Cd	P	NA	/	PASS
			Pb	P		/	
			Hg	P		/	
			Cr	P		/	
			Br	P		/	
			DEHP	NA	P	/	
			BBP	NA	P	/	
			DBP	NA	P	/	



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Tests Conducted

Part No.	Screened COMPONENTS	REFER INFORMATI ON	ITEMS	XRF RESUL TS	Screened RESULTS (PHTHALAT ES)	CHEMICAL CONFIRMATION RESULT (MG/KG)	CONCLUSIO N ON ROHS
			DIBP	NA	P	/	
13-4	SOLDER (SILVER METAL)	/	Cd	P	NA	/	PASS
			Pb	X		/	
			Hg	P		/	
			Cr	P		/	
			Br	NA		/	
			DEHP	NA	NA	/	
			BBP	NA	NA	/	
			DBP	NA	NA	/	
			DIBP	NA	NA	/	
13-5	SWITCH	/	Cd	P	NA	/	PASS
			Pb	P		/	
			Hg	P		/	
			Cr	P		/	
			Br	P		/	
			DEHP	NA	P	/	
			BBP	NA	P	/	
			DBP	NA	P	/	
			DIBP	NA	P	/	
13-6	IC	/	Cd	P	NA	/	PASS
			Pb	P		/	
			Hg	P		/	
			Cr	P		/	
			Br	P		/	
			DEHP	NA	P	/	
			BBP	NA	P	/	
			DBP	NA	P	/	
			DIBP	NA	P	/	
13-7	CAPACITOR	/	Cd	P	NA	/	PASS
			Pb	P		/	
			Hg	P		/	



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Tests Conducted

Part No.	Screened COMPONENTS	REFER INFORMATI ON	ITEMS	XRF RESUL TS	Screened RESULTS (PHTHALAT ES)	CHEMICAL CONFIRMATION RESULT (MG/KG)	CONCLUSIO N ON ROHS
			Cr	P		/	
			Br	P		/	
			DEHP	NA	P	/	
			BBP	NA	P	/	
			DBP	NA	P	/	
			DIBP	NA	P	/	
13-8	WIRE (SILVER METAL)	/	Cd	P	NA	/	PASS
			Pb	P		/	
			Hg	P		/	
			Cr	P		/	
			Br	NA		/	
			DEHP	NA	NA	/	
			BBP	NA	NA	/	
			DBP	NA	NA	/	
			DIBP	NA	NA	/	
13-9	WIRE JACKET (BLACK NONMETAL)	/	Cd	P	NA	/	PASS
			Pb	P		/	
			Hg	P		/	
			Cr	P		/	
			Br	P		/	
			DEHP	NA	P	/	
			BBP	NA	P	/	
			DBP	NA	P	/	
			DIBP	NA	P	/	
13-10	WIRE JACKET (RED NONMETAL)	/	Cd	P	NA	/	PASS
			Pb	P		/	
			Hg	P		/	
			Cr	P		/	
			Br	P		/	
			DEHP	NA	P	/	
			BBP	NA	P	/	



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Tests Conducted

Part No.	Screened COMPONENTS	REFER INFORMATI ON	ITEMS	XRF RESUL TS	Screened RESULTS (PHTHALAT ES)	CHEMICAL CONFIRMATION RESULT (MG/KG)	CONCLUSIO N ON ROHS
			DBP	NA	P	/	
			DIBP	NA	P	/	
13-11	SOLDER (SILVER METAL)	/	Cd	P	NA	/	PASS
			Pb	X		/	
			Hg	P		/	
			Cr	P		/	
			Br	NA		/	
			DEHP	NA	NA	/	
			BBP	NA	NA	/	
			DBP	NA	NA	/	
			DIBP	NA	NA	/	
13-12	PCB	/	Cd	P	NA	/	PASS
			Pb	P		/	
			Hg	P		/	
			Cr	P		/	
			Br	X		PBB=ND PBDE=ND	
			DEHP	NA	P	/	
			BBP	NA	P	/	
			DBP	NA	P	/	
			DIBP	NA	P	/	

P = Pass (Below the lower screening limits of table (B1 or B2))

X = Inconclusive result (Further chemical test was suggested (see table (B1 or B2).))

F = Fail (Exceeded the upper screening limits of table (B1))

NA = Not applicable

ND = Not detected

µg/cm² = Microgram per square centimeter

NT = Not tested

(B) Screening Limits

(B1) XRF Screening Limits in mg/kg for Regulated Elements in Various Matrices (mg/kg):

Element	Polymer Materials	Metallic Materials	Composite Materials
Cd	$P \leq 70 < X < 130 \leq F$	$P \leq 70 < X < 130 \leq F$	$P \leq 70 < X < 150 \leq F$
Pb	$P \leq 700 < X < 1300 \leq F$	$P \leq 700 < X < 1300 \leq F$	$P \leq 500 < X < 1500 \leq F$
Hg	$P \leq 700 < X < 1300 \leq F$	$P \leq 700 < X < 1300 \leq F$	$P \leq 500 < X < 1500 \leq F$
Cr	$P \leq 700 < X$	$P \leq 700 < X$	$P \leq 500 < X$



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Br	P ≤ 300 < X	Not applicable	P ≤ 250 < X
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(B2) Preliminary screening test will be used for phthalates, if the results exceed the warning area in the following table, further chemical methods will be conducted to confirm the exact content by GC/MS. (mg/kg)

Phthalates	Polymer
Bis(2-ethylhexyl)phthalate(DEHP)	P ≤ 600 < X
Butyl benzyl phthalate(BBP)	P ≤ 600 < X
Dibutyl phthalate(DBP)	P ≤ 600 < X
Diisobutyl phthalate(DIBP)	P ≤ 600 < X

(C) Estimated Detection Limits in mg/kg for Regulated Elements in Various Matrices (mg/kg):

Element	Polymer Materials	Metallic Materials	Composite Materials
Cd	50	70	70
Pb	100	200	200
Hg	100	200	200
Cr	100	200	200
Br	200	Not applicable	200

Disclaimers:

This XRF Screening and Chemical Confirmation Test Report is for reference purposes only. The applicant shall make its/his/her own judgment as to whether the information provided in this XRF Screening and Chemical Confirmation Test Report is sufficient for its/his/her purposes.

The results shown in this XRF Screening and Chemical Confirmation Test Report will differ based on various factors, including but not limited to, the sample size, thickness, area, surface flatness, equipment parameters and matrix effect (e.g. plastic, rubber, metal, glass, ceramic etc.). Further wet chemical pre-treatment with relevant chemical equipment analysis is required to obtain quantitative data.

(D) Chemical Test Methods:

Testing Item	Testing Method	Reporting Limit
Cadmium (Cd) Content	With reference to IEC 62321-5 Edition 1.0: 2013, by acid digestion and determined by ICP - OES	2 mg/kg
Lead (Pb) Content	With reference to IEC 62321-5 Edition 1.0: 2013, by acid digestion and determined by ICP - OES	2 mg/kg
Mercury (Hg) Content	With reference to IEC 62321-4 Edition 1.1: 2017, by acid digestion and determined by ICP - OES	2 mg/kg
Chromium (VI) (Cr ⁶⁺) Content	With reference to IEC 62321-7-1 Edition 1.0:2015, by boiling water extraction and determined by UV-VIS spectrophotometer	Positive(>0.13 µg/cm ²) / Negative(<0.10 µg/cm ²) / Inconclusive(0.10µg/cm ² --0.13 µg/cm ²)
Chromium (VI)(Cr ⁶⁺) Content	With reference to IEC 62321-7-2 Edition 1.0:2017, by alkaline digestion and determined by UV-VIS Spectrophotometer	10 mg/kg



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Testing Item	Testing Method	Reporting Limit
Polybrominated Biphenyls (PBBs) & Polybrominated Diphenyl Ethers (PBDEs) Content	With reference to IEC 62321-6 Edition 1.0:2015, by solvent extraction and determined by GC/MS and further HPLC confirmation when necessary	5 mg/kg
Phthalates (DEHP, BBP, DBP, DIBP) Content	With reference to IEC 62321-8 Edition 1.0:2017, by solvent extraction and determined by GC/MS	100mg/kg

(E) RoHS Requirement:

Restricted Substances	Limits
Cadmium (Cd)	0.01% (100 mg/kg)
Lead (Pb)	0.1% (1000 mg/kg)
Mercury (Hg)	0.1% (1000 mg/kg)
Chromium (VI) (Cr ⁶⁺)	0.1% (1000 mg/kg)
Polybrominated Biphenyls (PBBs)	0.1% (1000 mg/kg)
Polybrominated Diphenyl Ethers (PBDEs)	0.1% (1000 mg/kg)
Phthalates (DEHP, BBP, DBP, DIBP)	0.1% (1000 mg/kg)

The above limits were quoted from 2011/65/EU and (EU) 2015/863 for homogeneous material.

Date Sample Received: Sep 13, 2023

Testing Period: Sep 13, 2023 to Sep 23, 2023

Components list:

- (1) Black ink
- (2) Dark blue coating on plastic (telephone button)
- (3) Red coating on metal
- (4) Yellow plastic (backrest)
- (5) Black plastic on rope
- (6) White plastic (snap fastener)
- (7) Black plastic (buckle)
- (8) Green plastic
- (9) Rose red plastic
- (10) Red plastic (steering wheel)
- (11) Black plastic (cap nut)
- (12) Red plastic (seat)
- (13) White plastic on metal buckle
- (14) Red plastic (telephone)
- (15) White plastic excluding coating (telephone button)
- (16) Red plastic (handle)
- (17) Yellow plastic on steering wheel
- (18) White soft plastic rope
- (19) Orange soft plastic (button)
- (20) White soft plastic sticker with pattern (telephone)



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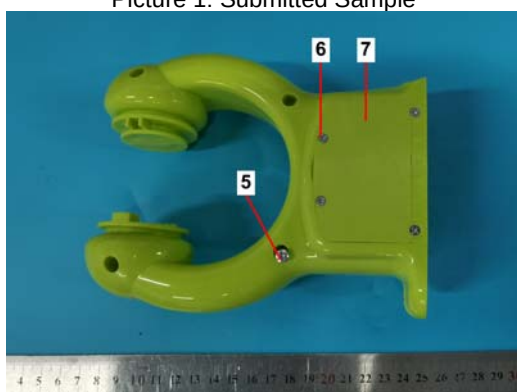
- (21) Wood
- (22) White webbing
- (23) Golden metal screw
- (24) Sliver metal (sheet)
- (25) Sliver metal screw
- (26) Sliver metal excluding red coating
- (27) Sliver metal (buckle)
- (28) Sliver metal bolt (big)
- (29) Sliver metal gasket (big)
- (30) Sliver metal nut (big)
- (31) Sliver metal bolt (small)
- (32) Sliver metal gasket (small)
- (33) Sliver metal nut (small)
- (34) Sliver metal loop



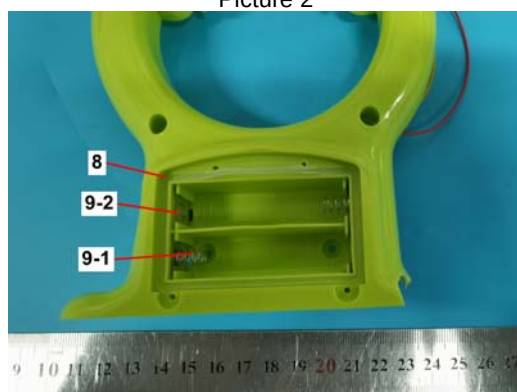
Picture 1: Submitted Sample



Picture 2



Picture 3

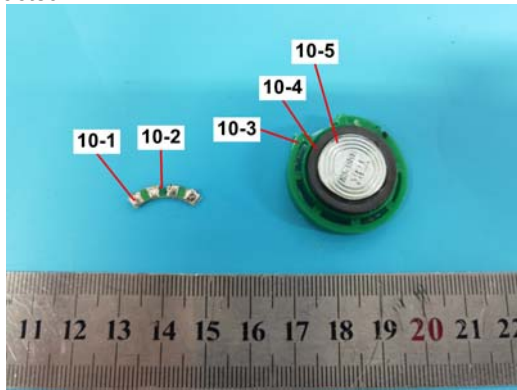


Picture 4

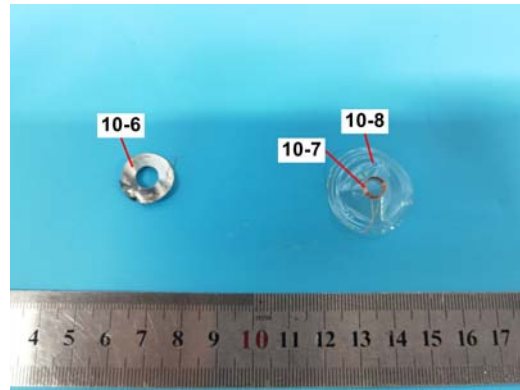
Test Report

Number: SHAH01602442S1

Tests Conducted



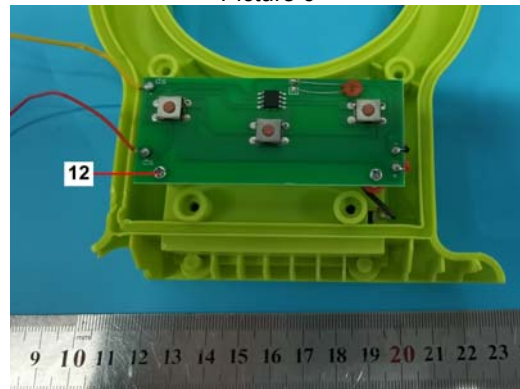
Picture 5



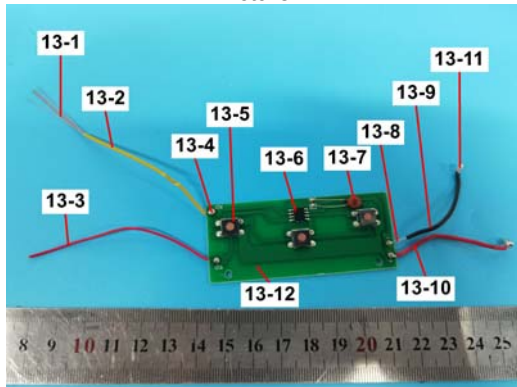
Picture 6



Picture 7



Picture 8



Picture 9

End Of Report

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To: NINGBO BEST SWING COMPANY LIMITED
Attention: KATHERINE

Date: Nov 21, 2023

Re: Report Revision Notification

Intertek Testing Services Report Number SHAH01602442 Dated Nov 17, 2023 .

Please be informed that all the content recorded in the above captioned report will be void. This captioned report is now superseded by a revised Intertek Testing Services Report Number **SHAH01602442S1**.

Reason for report revision: Typing error of sample information.

Thank you for your attention.

Authorized By:
Intertek Testing Services Ltd. Zhejiang



Bobo Yao
Assistant General Manager

