

Test Report

Report No.: CTT2410010437EN

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Applicant: PIANO PAL LLC.

Address: US,CALIFORNIA,CULVER CITY,6160 CANTERBURY DRIVE

Sample Received Date: Oct. 09, 2024

Completed Date: Oct. 12, 2024

Report Date: Oct. 12, 2024

The following merchandise was (were) submitted and identified on behalf of the applicant as:

Sample Name: piano sound book

Sample Model: HXS-piano sound book-001

P/O No.: 222425539501025908

Sample Color: CMYK

Sample Quantity: 4pcs

Manufacturer: Shenzhen HXS Electronics Ltd.

Manufacturer Address: CN,Guangdong,Shenzhen,101, 201, 301, No. 5, Longbeiji, Dongfeng Industrial Zone, Songgang Community, Songgang Subdistrict, Baoan District

Supplier: Shenzhen HXS Electronics Ltd.


Country of Origin: China

Test Age Group: 3+

Test Result(s): Please refer to next page(s).

Test Requested and Conclusion(s): Please refer to next page(s).

Signed for and on Behalf of CTT:



Yanfen Huang/Jim Tan
Technical Manager



Verification Report

Test Report

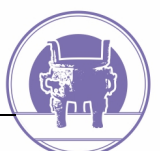
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Test Requested and Conclusion(s):

No.	Standard and Requirement	Conclusion(s)
1	ASTM F963-23: Mechanical and physical properties	PASS
2	ASTM F963-23 Section 4.2: Flammability	PASS
3	CPSIA: Tracking Labels for Children's Products: As specified in Consumer Product Safety Improvement Act (CPSIA) of 2008 Section 103	PASS
4	US Public Law 110-314 [Consumer Product Safety Improvement Act of 2008(CPSIA) Sec. 101] - Total Lead (Pb) in accessible substrate materials	PASS
5	US Public Law 110-314 [Consumer Product Safety Improvement Act of 2008(CPSIA) Sec. 101] - Total Lead (Pb) in paint or surface coating	NA
6	US Public Law 110-314 [Consumer Product Safety Improvement Act of 2008(CPSIA) Sec. 108] and CPSC 16 CFR 1307 - Phthalates	PASS
7	CPSC 16 CFR 1303 - Total Lead (Pb) in paint or surface coating	NA
8	ASTM F963-23 Section 4.3.5.1 (Paint and Surface Coating) - Total Lead	NA
9	ASTM F963-23 Section 4.3.5.2 (Non-metallic Materials) - Total Lead	PASS
10	ASTM F963-23, Section 4.3.8 - Phthalates	PASS
11	ASTM F963-23 Section 4.3.5.1 (Coating Materials) - Soluble heavy metal elements	NA
12	ASTM F963-23 Section 4.3.5.2 (Non-Modeling Clays) - Soluble heavy metal elements	PASS

NOTE: 1. NA = Not Applicable.



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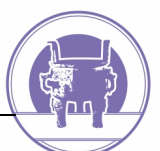
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Test Result(s):

Mechanical and Physical Properties - ASTM F963-23

Section	Testing Items	Assessment
		6
4	Safety Requirements	
4.1	Material Quality	PASS
4.3.7	Stuffing Materials	NA
4.4	Electrical/Thermal Energy	NA
4.5	Sound-producing Toys	PASS
4.6	Small Objects	NA
4.6.1	Toys that are intended for children under 36 months of age	NA
4.6.2	Mouth-actuated Toys	NA
4.6.3	Toys and games that are intended for use by children who are at least three years old but less than six years of age	NA
4.7	Accessible Edges	PASS
4.8	Projections	NA
4.9	Accessible Points	PASS
4.10	Wires or Rods	NA
4.11	Nails and Fasteners	PASS
4.12	Plastic Film	NA
4.13	Folding Mechanisms and Hinges	NA
4.14	Cords, Straps, and Elastics	NA
4.15	Stability and Over-Load Requirements	NA
4.15.1	Stability of Ride-On Toys and Toy Seats	NA
4.15.2	Sideways Stability Requirements	NA
4.15.3	Fore and Aft Stability	NA
4.15.4	Stability of Stationary Floor Toys	NA
4.15.5	Overload Requirements for Ride-On Toys and Toy Seats	NA
4.15.6	Wheeled Ride-on Toys	NA
4.16	Confined Spaces	NA
4.17	Wheels, Tires, and Axles	NA
4.18	Holes, Clearance, and Accessibility of Mechanisms	PASS
4.19	Simulated Protective Devices	NA
4.20	Pacifiers	NA
4.21	Projectile Toys	NA
4.21.1	All Projectiles	NA

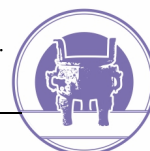


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4.21.2	Projectile Toys with Stored Energy	NA
4.21.3	Projectile Toys without Stored Energy	NA
4.21.3.1	Mouth actuated projectile toys	NA
4.21.3.2	Projectiles shall not have any sharp edges or sharp points	NA
4.21.3.3	Arrows intended to be launched from a bow	NA
4.21.3.4	Projectiles in the form of an arrow	NA
4.21.4	Rotors	NA
4.22	Teethers and Teething Toys	NA
4.23	Rattles	NA
4.24	Squeeze Toys	NA
4.25	Battery-operated Toys	PASS
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
4.32	Certain Toys with Nearly Spherical Ends	NA
4.33	Marbles	NA
4.34	Balls	NA
4.34.1	Toy intended for children under 36 months of age	NA
4.34.2	Toys intended for children at least 3 years old but less than 8 years of age that contain a loose small ball	NA
4.35	Pompoms	NA
4.36	Hemispheric-Shaped Objects	NA
4.37	Yo Yo 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
4.41.1	Lid Support	NA
4.41.2	Hinge Line Clearance	NA
4.41.3	Closures	NA
4.41.4	Ventilation	NA
4.41.5	Toy chests shall comply with the requirements listed in 6.8 for accompanying instructional literature and 7.3 for producer's	NA



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	markings	
5	Labeling Requirement	
5.1.2	Tracking Label	PASS
5.4	Aquatic Toys	NA
5.5	Crib and Playpen Toys	NA
5.6	Mobiles	NA
5.7	Stroller and Carriage toys	NA
5.8	Toys Intended to be Assembled By an Adult	NA
5.9	Simulated Protective Devices	NA
5.10	Toys with Functional Sharp Edges or Points	NA
5.11	Small Objects, Small Balls, Marbles, and Balloons	NA
5.12	Art Materials	NA
5.13	Electric Toys	NA
5.14	Battery-Operated Toys	NA
5.15	Promotional Materials	PASS
5.16	Magnets	NA
6	Instructional Literature	
6.1	Definition and Description	PASS
6.2	Crib and Playpen Toys	NA
6.3	Mobiles	NA
6.4	Toys Intended to be Assembled By an Adult	NA
6.5	Battery-Operated toys	NA
6.6	Battery-powered Ride-on Toys	NA
6.7	Toys in Contact with Food	NA
6.8	Toy Chests	NA
6.9	The instructional material for toys which require a manufacturer-supplied specialty or custom tool to access the battery	NA
7	Producer's Marking	
7.1	Name of the producer or the distributor	PASS
	Address of the producer or the distributor	PASS
7.2	Battery-Powered Ride-on Toys	NA
7.3	Toy Chests	NA

Note: 1.NA = Not Applicable

2.The name and address of the producer or the distributor shall be marked on the toy or the package.



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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:

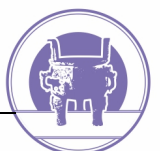
Testing Items	FHSA	Parameter
		6
Drop Test	Section 1500.53(b)	4×3.0 ft
Torque Test	Section 1500.53(e)	4.0 inch · lbf
Tension Test	Section 1500.53(f)	15 lbf

Test Result(s):

Flammability - ASTM F963-23 Annex A5

Sample Description	Ignition Location	Burn Length (inch)	Burn Time (sec.)	Burn Rate (inch/sec.)	Limit (inch/sec.)	Conclusion
6	Edge	/	/	DNI	0.15	PASS

- Note:**
1. DNI = Did not ignite.
 2. IBE = Ignited but self-extinguished before burn-rate could be determined.
 3. All styles of the submitted toy samples (and its accessories) was/were tested, the above result only showed the most severe burn rate of the samples.



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Test Result(s):

CPSIA Tracking Labels for Children's Products (Visual)

Method: As Specified in Consumer Product Safety Improvement Act (CPSIA) of 2008 Section 103
Tracking label on the product ¹

Requirement	Result
	6
Name of the manufacture or the name of the private labeler.	PRESENT
Manufacture location, including the name of the city and country, or the name of other means of coding of city and state.	PRESENT
Date of the production of the product, in a form of Month/ Year or any other coding system.	PRESENT
The cohort information(including the batch, run number, or other identifying characteristic.	PRESENT
Permanent remark	PASS

Note: 1. The tracking label assessment was based on the submitted samples and the information provided or not provided by the applicant. There is no verification on the validity of such information.

Test Result(s):

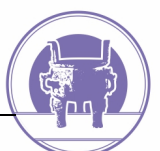
Total Lead (Pb) in accessible substrate materials - US Public Law 110-314 [Consumer Product Safety Improvement Act of 2008(CPSIA) Sec. 101]

Method: CPSC-CH-E1002-08.3, analyzed by Atomic Absorption Spectrometer (AAS) .

Substances	Lead (Pb)	Conclusion
CAS No.	7439-92-1	
LOQ (mg/kg)	10	
Limit (mg/kg)	100	
Material No.	Result (mg/kg)	
1+3+4	N.D.	PASS

NOTE:

1. mg/kg = milligram per kilogram (ppm).
2. N.D. = Not Detected (Less than LOQ, LOQ = Limit of Quantitation).
3. "+" = The "+" in the test sample description indicates a mixed test. The test results are the overall results of the mixed materials. The individual result of one or more materials in the mixed material may be greater than the mixed test result. Conclusion of compliance also applies to the individual materials in a mixed test only if multiplying the LOQ (Limit of Quantitation) and the number of mixed materials is less than the limit.



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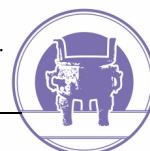
Test Result(s):

Phthalates - US Public Law 110-314 [Consumer Product Safety Improvement Act of 2008(CPSIA) Sec. 108] and CPSC 16 CFR 1307

Method: CPSC-CH-C1001-09.4 (2018), analyzed by Gas Chromatography-Mass Spectrometer (GC-MS) .

No.	Substances Name	CAS No.	Limit (mg/kg)	LOQ (mg/kg)	Result (mg/kg)
					1+3+4
1	Di-butyl phthalate (DBP)	84-74-2	1000	50	N.D.
2	Butyl benzyl phthalate (BBP)	85-68-7	1000	50	N.D.
3	Bis(2-ethylhexyl) phthalate (DEHP)	117-81-7	1000	50	N.D.
4	Diisononyl phthalate (DINP)	28553-12-0/ 68515-48-0	1000	100	N.D.
5	Phthalic acid, bis-hexyl ester (DNHP/DHEXP/DHP)	84-75-3	1000	50	N.D.
6	Di-iso-butyl phthalate (DIBP)	84-69-5	1000	50	N.D.
7	Phthalic acid, bis-n-pentyl ester (DPP/DPENP/DnPP)	131-18-0	1000	50	N.D.
8	Di-cyclohexyl phthalate (DCHP)	84-61-7	1000	50	N.D.
Conclusion					PASS

- NOTE:**
1. mg/kg = milligram per kilogram (ppm).
 2. N.D. = Not Detected (Less than LOQ, LOQ = Limit of Quantitation).
 3. Children's toys and child care articles shall not more than 1000mg/kg of DBP, BBP, DEHP, DINP, DIBP, DCHP,DPENP and DNHP (DHEXP)
 - Children's toys defined as 12 years and under.
 - Child care articles to facilitate sleep or feeding of children 3 years and under, or to help children with sucking and teething.
 4. Polypropylene (PP), polyethylene (PE), acrylonitrile butadiene styrene (ABS), general purpose polystyrene (GPPS), medium-impact polystyrene (MIPS), high-impact polystyrene (HIPS), and super high-impact polystyrene (SHIPS), and their additives as listed in 16 CFR 1308 are exempt from testing. If material identification is not provided, phthalate testing will be conducted on all plastic materials.
 5. "+" = The "+" in the test sample description indicates a mixed test. The test results are the overall results of the mixed materials. The individual result of one or more materials in the mixed material may be greater than the mixed test result. Conclusion of compliance also applies to the individual materials in a mixed test only if multiplying the LOQ (Limit of Quantitation) and the number of mixed materials is less than the limit.



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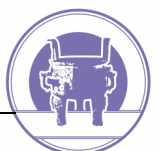
Test Result(s):

Total Lead - ASTM F963-23 Section 4.3.5.2 (Non-metallic Materials)

Substances	Lead (Pb)	Conclusion
CAS No.	7439-92-1	
LOQ (mg/kg)	10	
Limit (mg/kg)	100	
Material No.	Result (mg/kg)	
(1+3+4)D	N.D.	PASS

NOTE:

1. mg/kg = milligram per kilogram (ppm).
2. N.D. = Not Detected (Less than LOQ, LOQ = Limit of Quantitation).
3. "+" = The "+" in the test sample description indicates a mixed test. The test results are the overall results of the mixed materials. The individual result of one or more materials in the mixed material may be greater than the mixed test result. Conclusion of compliance also applies to the individual materials in a mixed test only if multiplying the LOQ (Limit of Quantitation) and the number of mixed materials is less than the limit.
4. "D" = The sample(s) is(are) tested according to the method CPSC-CH-E1002-08.3.



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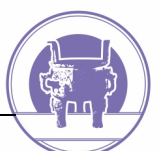
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Test Result(s):

Phthalates - ASTM F963-23, Section 4.3.8

No.	Substances Name	CAS No.	Limit (mg/kg)	LOQ (mg/kg)	Result (mg/kg)
					(1+3+4)D
1	Di-butyl phthalate (DBP)	84-74-2	1000	50	N.D.
2	Butyl benzyl phthalate (BBP)	85-68-7	1000	50	N.D.
3	Bis(2-ethylhexyl) phthalate (DEHP)	117-81-7	1000	50	N.D.
4	Diisononyl phthalate (DINP)	28553-12-0/ 68515-48-0	1000	100	N.D.
5	Phthalic acid, bis-hexyl ester (DNHP/DHEXP/DHP)	84-75-3	1000	50	N.D.
6	Di-iso-butyl phthalate (DIBP)	84-69-5	1000	50	N.D.
7	Phthalic acid, bis-n-pentyl ester (DPP/DPENP/DnPP)	131-18-0	1000	50	N.D.
8	Di-cyclohexyl phthalate (DCHP)	84-61-7	1000	50	N.D.
Conclusion					PASS

- NOTE:**
1. mg/kg = milligram per kilogram (ppm).
 2. N.D. = Not Detected (Less than LOQ, LOQ = Limit of Quantitation).
 3. "+" = The "+" in the test sample description indicates a mixed test. The test results are the overall results of the mixed materials. The individual result of one or more materials in the mixed material may be greater than the mixed test result. Conclusion of compliance also applies to the individual materials in a mixed test only if multiplying the LOQ (Limit of Quantitation) and the number of mixed materials is less than the limit.
 4. "D" = The sample(s) is(are) tested according to the method CPSC-CH-C1001-09.4 (2018).



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Test Result(s):

Soluble heavy metal elements - ASTM F963-23 Section 4.3.5.2 (Non-Modeling Clays)

Method: ASTM F963-23, analyzed by Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES).

No.	Substances Name	CAS No.	Limit (mg/kg)	LOQ (mg/kg)	Result (mg/kg)	
					1	2
1	Soluble Antimony (Sb)	7440-36-0	60	5	N.D.	N.D.
2	Soluble Arsenic (As)	7440-38-2	25	2.5	N.D.	N.D.
3	Soluble Barium (Ba)	7440-39-3	1000	5	N.D.	N.D.
4	Soluble Cadmium (Cd)	7440-43-9	75	5	N.D.	N.D.
5	Soluble Chromium (Cr)	7440-47-3	60	5	N.D.	N.D.
6	Soluble Lead (Pb)	7439-92-1	90	5	N.D.	N.D.
7	Soluble Mercury (Hg)	7439-97-6	60	5	N.D.	N.D.
8	Soluble Selenium (Se)	7782-49-2	500	5	N.D.	N.D.
Conclusion					PASS	PASS

No.	Substances Name	CAS No.	Limit (mg/kg)	LOQ (mg/kg)	Result (mg/kg)	
					3	4
1	Soluble Antimony (Sb)	7440-36-0	60	5	N.D.	N.D.
2	Soluble Arsenic (As)	7440-38-2	25	2.5	N.D.	N.D.
3	Soluble Barium (Ba)	7440-39-3	1000	5	N.D.	N.D.
4	Soluble Cadmium (Cd)	7440-43-9	75	5	N.D.	N.D.
5	Soluble Chromium (Cr)	7440-47-3	60	5	N.D.	N.D.
6	Soluble Lead (Pb)	7439-92-1	90	5	N.D.	N.D.
7	Soluble Mercury (Hg)	7439-97-6	60	5	N.D.	N.D.
8	Soluble Selenium (Se)	7782-49-2	500	5	N.D.	N.D.
Conclusion					PASS	PASS



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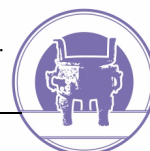
No.	Substances Name	CAS No.	Limit (mg/kg)	LOQ (mg/kg)	Result (mg/kg)
					5
1	Soluble Antimony (Sb)	7440-36-0	60	5	N.D.
2	Soluble Arsenic (As)	7440-38-2	25	2.5	N.D.
3	Soluble Barium (Ba)	7440-39-3	1000	5	N.D.
4	Soluble Cadmium (Cd)	7440-43-9	75	5	N.D.
5	Soluble Chromium (Cr)	7440-47-3	60	5	N.D.
6	Soluble Lead (Pb)	7439-92-1	90	5	N.D.
7	Soluble Mercury (Hg)	7439-97-6	60	5	N.D.
8	Soluble Selenium (Se)	7782-49-2	500	5	N.D.
Conclusion					PASS

NOTE:

1. mg/kg = milligram per kilogram (ppm).
2. N.D. = Not Detected (Less than LOQ, LOQ = Limit of Quantitation).

Test Material List

Material No.	Sample Description	Location
1	Transparent plastic with multicolor printing with glue	Piano key substrate
2	White paper with multicolor printing with transparent plastic	Cover
3	Transparent plastic with multicolor printing	Inside pages
4	White plastic	Battery box/battery cover
5	Black plastic	Switch
6	Piano sound book	Individual

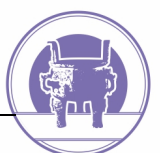


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Photo of Sample:



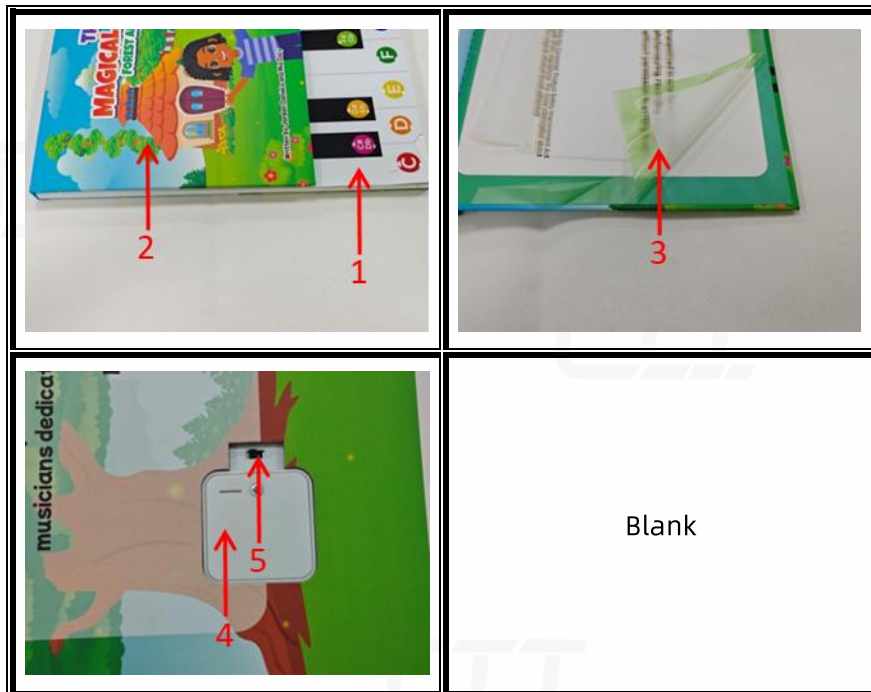
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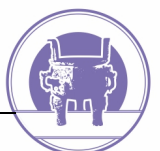
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Location indication:



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