

TEST REPORT

Applicant: HOK ASIA
UNIT 1606 16/F COMWEB PLAZA
12 CHEUNG YUE ST
LAI CHI KOK KLN
HK

Number: HKGH02419014

Date: Mar 22, 2019

Attn: GILLES DE CRAYENCOUR

Submitted sample said to be :
Item Name : **ULTRASOFT (Any designs, Any sizes in this quality)**
Quantity : 3 pieces
Labelled Age Group : "18+"
Packaging Provided : Yes

For and on behalf of :
Intertek Testing Services HK Ltd.



Angel Y.F. Cheung
Vice President



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Conclusion:

The submitted sample was tested under the following requirements requested by the applicant, subject to the information stated in the remark and attached page(s) for details :

<u>Requirement</u>	<u>Result</u>
(1) EN71-1: 2014 + A1: 2018 - Mechanical and Physical Properties	Pass
(2) EN71-2 : 2011 + A1 : 2014 - Flammability Test	Pass
(3) EN71-3 : 2013 + A1:2014 - Migration of certain elements	Pass
EN71-3 : 2013 + A3:2018 - Migration of certain elements	Pass
(4) EU Commission Directive 2017/898 amending Appendix C of Annex II to Directive 2009/48/EC on the safety of toys - Bisphenol A migration content	Pass
(5) EU Commision Directive 2017/774 amending Appendix C of Annex II to Directive 2009/48/EC on the safety of toys - Phenol migration content	Pass
(6) 94/62/EC and amendment 2013/2/EU & Directive (EU) 2015/720 Directive (packaging waste) - Toxic elements test	Pass
(7) EU Commission Directive 2014/79/EU amending Appendix C of Annex II to Directive 2009/48/EC on the safety of toys - TCEP, TCPP and TDCP content	Pass



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(1) Physical and Mechanical Tests

Test Standard : European Standard on Safety of Toys EN71-1:2014 + A1: 2018

Age group for testing : For All Ages

Clause	Testing Items
8.3	Torque test (0.34 Nm)
8.4.2.1	Tension test (90 N)
8.5	Drop Test (850 mm x 5)
8.7	Impact test (1 kg)
8.8	Compression test (110 N)

Clause	Requirement	Assessment
4	General requirements	
4.1	Material cleanliness	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	NA
4.10	Parts moving against each other	NA
4.11	Mouth actuated toys and other toys intended to be put into 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	Projectiles	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	NA
4.21	Toys containing 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	Flyings	NA
5	Toys intended for children under 36 months	
5.1	General requirements for toys intended for children under 36 months	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	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



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Clause	Requirement	Assessment
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 (7.24)	NA
6	Packaging	P
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	Projectiles	NA
7.8	Imitation protective masks and helmets	NA
7.9	Toy kites	NA
7.10	Roller skates, inline skates, skateboards and certain other ride-on toys	NA
7.11	Toys intended to be attached to or 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
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

Abbreviation : P = Pass NA = Not Applicable



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As requested by applicant, samples were tested to EN71-1 both before and after washing. No difference in test results before and after washing. Test method of washing is not accredited,

The submitted samples were undergone the abuse tests for Clause 5.1 in according to 8.3 (Torque test), 8.4 (Tension test), 8.5 (Drop test), 8.7 (Impact test), 8.8 (Compression test) and specific tests for different types of toys whichever applicable.

Below are additional information according to the Toy Safety Directive 2009/48/EC requirement. These information also appears as a note within the EN71 but are not standard requirements and not accredited:

Marking

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 product itself. In addition, toys or packagings shall also bear the CE-marking. After checking, it was found that

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

Cleaning instruction

A toy intended for use by children under 36 months must be designed and manufactured in such a way that it can be cleaned. The toy shall fulfill the safety requirements also after having been cleaned in accordance with this point and the manufacturer's instructions. The manufacturer should, if applicable, provided instructions on how the toy has to be cleaned.

After checking, the cleaning instruction was found on the submitted samples.

Date sample received : Mar 05, 2019

Test Period : Mar 05, 2019 to Mar 07, 2019



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(2) Flammability Test

Test Standard : European Standard on Safety of Toys EN71-2 : 2011 + A1 : 2014

Clause	Requirement	Assessment
4.1	General	P
4.2	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

Abbreviation : P = Pass NA = Not Applicable

As requested by applicant, samples were tested to EN71-2 both before and after washing.
No difference in test results before and after washing.

Date sample received : Mar 05, 2019
Test Period : Mar 05, 2019 to Mar 07, 2019



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(3) 19 Toxic Element Migration Test

Test Method : Acid extraction method was used and toxic elements content were determined by Inductively Coupled Argon Plasma Spectrometry and/or Ion Chromatography- Inductively Coupled Plasma-Mass Spectrometry and/or Gas Chromatographic - Mass Spectrometry

Category (III): Scraped-off toy material:

	Result (mg/kg)			Limit (mg/kg)
	(1)	(2)	(3)	
Soluble Aluminium (Al)	<300	<300	<300	70000
Soluble Antimony (Sb)	<10	<10	<10	560
Soluble Arsenic (As)	<10	<10	<10	47
Soluble Barium (Ba)	<10	<10	<10	18750
Soluble Boron (B)	<50	<50	<50	15000
Soluble Cadmium (Cd)	<5	<5	<5	17
Soluble Chromium (III) (Cr III) ++	<10	<10	<10	460
Soluble Chromium (VI) (Cr VI) ++	<0.025	<0.025	<0.025	0.2
Soluble Cobalt (Co)	<10	<10	<10	130
Soluble Copper (Cu)	<10	<10	<10	7700
Soluble Lead (Pb)	<10	<10	<10	23
Soluble Manganese (Mn)	<10	<10	<10	15000
Soluble Mercury (Hg)	<10	<10	<10	94
Soluble Nickel (Ni)	<10	<10	<10	930
Soluble Selenium (Se)	<10	<10	<10	460
Soluble Strontium (Sr)	<100	<100	<100	56000
Soluble Tin (Sn)	<4	<4	<4	180000
Soluble Organic tin ++	<2.0	<2.0	<2.0	12
Soluble Zinc (Zn)	<100	<100	<100	46000



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	Result (mg/kg)			Limit (mg/kg)
	(4)	(5)	(6)	
Soluble Aluminium (Al)	<300	<300	<300	70000
Soluble Antimony (Sb)	<10	<10	<10	560
Soluble Arsenic (As)	<10	<10	<10	47
Soluble Barium (Ba)	<10	<10	<10	18750
Soluble Boron (B)	<50	<50	<50	15000
Soluble Cadmium (Cd)	<5	<5	<5	17
Soluble Chromium (III) (Cr III) ++	<10	<10	<10	460
Soluble Chromium (VI) (Cr VI) ++	<0.025	<0.025	<0.025	0.2
Soluble Cobalt (Co)	<10	<10	<10	130
Soluble Copper (Cu)	<10	<10	<10	7700
Soluble Lead (Pb)	<10	<10	<10	23
Soluble Manganese (Mn)	<10	<10	<10	15000
Soluble Mercury (Hg)	<10	<10	<10	94
Soluble Nickel (Ni)	<10	<10	<10	930
Soluble Selenium (Se)	<10	<10	<10	460
Soluble Strontium (Sr)	<100	<100	<100	56000
Soluble Tin (Sn)	<4	<4	<4	180000
Soluble Organic tin ++	<2.0	<2.0	<2.0	12
Soluble Zinc (Zn)	<100	<100	<100	46000



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	Result (mg/kg)			Limit (mg/kg)
	(7)	(8)	(9)	
Soluble Aluminium (Al)	<300	<300	<300	70000
Soluble Antimony (Sb)	<10	<10	<10	560
Soluble Arsenic (As)	<10	<10	<10	47
Soluble Barium (Ba)	<10	<10	<10	18750
Soluble Boron (B)	<50	<50	<50	15000
Soluble Cadmium (Cd)	<5	<5	<5	17
Soluble Chromium (III) (Cr III) ++	<10	<10	<10	460
Soluble Chromium (VI) (Cr VI) ++	<0.025	<0.025	<0.025	0.2
Soluble Cobalt (Co)	<10	<10	<10	130
Soluble Copper (Cu)	<10	<10	<10	7700
Soluble Lead (Pb)	<10	<10	<10	23
Soluble Manganese (Mn)	<10	<10	<10	15000
Soluble Mercury (Hg)	<10	<10	<10	94
Soluble Nickel (Ni)	<10	<10	<10	930
Soluble Selenium (Se)	<10	<10	<10	460
Soluble Strontium (Sr)	<100	<100	<100	56000
Soluble Tin (Sn)	<4	<4	<4	180000
Soluble Organic tin ++	<2.0	<2.0	<2.0	12
Soluble Zinc (Zn)	<100	<100	<100	46000



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	Result (mg/kg)			Limit (mg/kg)
	(10)	(11)	(12)	
Soluble Aluminium (Al)	<300	<300	<300	70000
Soluble Antimony (Sb)	<10	<10	<10	560
Soluble Arsenic (As)	<10	<10	<10	47
Soluble Barium (Ba)	<10	<10	<10	18750
Soluble Boron (B)	<50	<50	<50	15000
Soluble Cadmium (Cd)	<5	<5	<5	17
Soluble Chromium (III) (Cr III) ++	<10	<10	<10	460
Soluble Chromium (VI) (Cr VI) ++	<0.025	<0.025	<0.025	0.2
Soluble Cobalt (Co)	<10	<10	<10	130
Soluble Copper (Cu)	<10	<10	<10	7700
Soluble Lead (Pb)	<10	<10	<10	23
Soluble Manganese (Mn)	<10	<10	<10	15000
Soluble Mercury (Hg)	<10	<10	<10	94
Soluble Nickel (Ni)	<10	<10	<10	930
Soluble Selenium (Se)	<10	<10	<10	460
Soluble Strontium (Sr)	<100	<100	<100	56000
Soluble Tin (Sn)	<4	<4	<4	180000
Soluble Organic tin ++	<2.0	<2.0	<2.0	12
Soluble Zinc (Zn)	<100	<100	<100	46000

mg/kg = milligram per kilogram



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++ : 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.

Organic tin test result was expressed as tributyl tin.

The new chromium (VI) migration limit (0.053 mg/kg) for Category (III) was quoted from directive (EU) Directive 2018/725 amending 2009/48/EC effective from 18 November 2019.

Tested Components:

- (1) White plastic (base of mat).
- (2) 2mm green/ dull green/ deep green/ brown printed plush (tree, background).
- (3) 2mm deep grey/ light grey/ pale grey/ blue/ red printed plush (road, car park).
- (4) 2mm deep brown/ dull grey/ dull brown/ yellow printed plush (rail, construction site).
- (5) 2mm multicolor printed plush (house with reddish brown roof, fire department).
- (6) 2mm multicolor printed plush (house with greyish blue roof).
- (7) 2mm multicolor printed plush (cinema).
- (8) 2mm multicolor printed plush (hospital, super shop).
- (9) 2mm light blue printed plush (logo).
- (10) 2mm multicolor printed plush (building, ferris wheel).
- (11) White brushed knit with multicolor printings (binding of mat).
- (12) Grey felt (base of mat).

Date sample received : Mar 05, 2019

Test Period : Mar 05, 2019 to Mar 08, 2019



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(4) Bisphenol A (BPA) Migration Content

Test Standard : EN71 Part 10 and 11 : 2005.

Tested Component	Result in mg/l	Limit in mg/l
(1)	<0.01	0.04

The above limit was quoted according to EU Commission Directive 2017/898 amending Appendix C of Annex II to Directive 2009/48/EC of the European Parliament and of the Council on the safety of toys, as regards Bisphenol A with effective date on 26 Novemeber 2018.

mg/l = milligram per litre

Tested Component:

(1) White plastic (base of mat).

Date sample received : Mar 05, 2019

Test Period : Mar 05, 2019 to Mar 20, 2019



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(5) Phenol Migration Content

Test Standard : EN71 Part 10 and 11 : 2005.

Tested Component	Result in mg/l	Limit in mg/l
(1)	<1	5

The above limit was quoted according to EU Commission Directive 2017/774 amending Appendix C of Annex II to Directive 2009/48/EC of the European Parliament and of the Council on the safety of toys, as regards Phenol with effective date on 4 November 2018.

mg/l = milligram per litre

Tested Component:

(1) White plastic (base of mat).

Date sample received : Mar 05, 2019

Test Period : Mar 05, 2019 to Mar 20, 2019



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(6) Toxic Elements Analysis

Test Method : 94/62/EC and amendment 2013/2/EU & Directive (EU) 2015/720 Directive on packaging and packaging waste, acid digestion method was used and toxic elements contents were determined by Inductively Coupled Argon Plasma Spectrometry, and Hexavalent Chromium content was determined by UV-Visible Spectrophotometry.

	Result (ppm)			Limit (ppm)
	(1)	(2)	(3/4/5)	
Total Lead (Pb)	<5	<5	<5	--
Total Cadmium (Cd)	<5	<5	<5	--
Total Mercury (Hg)	<5	<5	<5	--
Chromium VI (Cr (VI))	<1	<1	<1	--
Sum of Lead, Cadmium, Mercury and Chromium Cr (VI)	<16	<16	<16	100

ppm = parts per million = mg/kg

Tested Components:

- (1) Coatings on paper card (wrapped card) (packaging).
- (2) Paper card excluding coatings (wrapped card) (packaging).
- (3) Transparent plastic sheet (wrapped strap) (packaging).
- (4) Transparent adhesive tape (packaging).
- (5) Transparent plastic (polybag) (packaging).

Date sample received : Mar 05, 2019

Test Period : Mar 05, 2019 to Mar 08, 2019



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(7) Flame retardants (TCEP, TCPP, TDCP) Content

Test Method : By solvent extraction and determined by Gas Chromatographic-Mass Spectrometry (GC-MS).

Compound	Result (mg/kg)			Limit (mg/kg)
	(1)	(2)	(3/4)	
Tris(2-chloroethyl) phosphate (TCEP)	<1	<1	<1	5
Tris(1-chloro-2-propyl) phosphate (TCPP)	<1	<1	<1	5
Tris(2-chloro-1-(chloromethyl)ethyl) phosphate (TDCP)	<1	<1	<1	5

Compound	Result (mg/kg)	Limit (mg/kg)
	(5)	
Tris(2-chloroethyl) phosphate (TCEP)	<1	5
Tris(1-chloro-2-propyl) phosphate (TCPP)	<1	5
Tris(2-chloro-1-(chloromethyl)ethyl) phosphate (TDCP)	<1	5

The above limit was quoted according to EU Commission Directive 2014/79/EU amending Appendix C of Annex II to Directive 2009/48/EC of the European Parliament and of the Council on the safety of toys, as regards TCEP, TCPP and TDCP

mg/kg = milligram per kilogram

Tested Components:

- (1) White plastic (base of mat).
- (2) 2mm multicolor printed plush (body of mat).
- (3) White brushed knit with multicolor printings (binding of mat).
- (4) Grey felt (base of mat).
- (5) White foam (inner part of mat) (internal).

Date sample received : Mar 05, 2019

Test Period : Mar 05, 2019 to Mar 20, 2019



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End of report

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