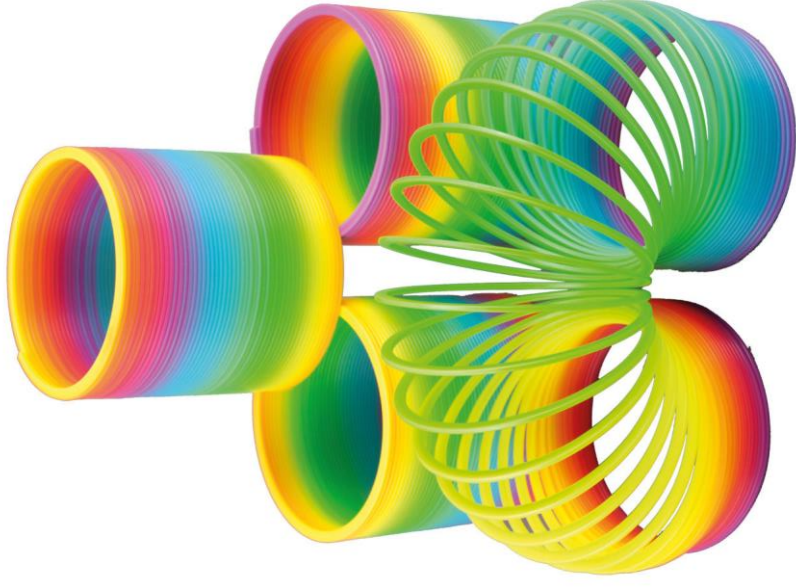


10410 Regenbogen-Spirale XL

EN 71 -1/-2/-3 REACH



TEST REPORT

Applicant:

Number : TWNH00087424

Issue Date : Dec 11, 2020

Sample Description:

One (1) Group of Submitted Samples Said To Be :

Item Name	: Magic Spring
Item No.	: FD-85/FD-85NT/FD-85U
Quantity	: 1 Group
Country of Origin	: TAIWAN
Date Sample Received	: Dec 07, 2020
Date Test Started	: Dec 07, 2020

Test Conducted:

As requested by the applicant, for details please refer to attached pages.


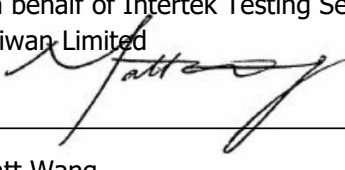
Conclusion:

Please see page two to four.

Remarks:

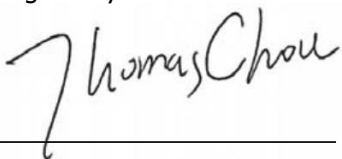
#1 = Results were transferred from report no. TWNH00087419 dated Dec 11, 2020.

Authorized By:
On behalf of Intertek Testing Services
Taiwan Limited



Matt Wang
Sr. Manager

Signed by:



Thomas Chou
Manager



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TEST REPORT

Number : TWNH00087424

Conclusion:

Tested sample Submitted Samples	Standard	Result
	Mechanical and physical properties – As per European standard on safety of toys EN 71 part 1:2014 + A1 : 2018	Pass
	Flammability test – As per European standard on safety of toys EN 71 part 2: 2011+A1:2014	Pass
Tested Components of Submitted Samples	19 Toxic Element Migration Test – As per European standard on safety of toys EN 71-3:2019	Pass
	Phthalates Content – As per annex XVII items 51 and items 52 of the REACH regulation (EC) No. 1907/2006 and it's amendment (EU) 2018/2005	Pass (#1)
Submitted Samples	Physical And Mechanical Properties – ASTM F963-17 excluding section 7.1	Pass
	Flammability Test Of Materials Other Than Textile Materials – ASTM F963-17, section 4.2	Pass
	Toxic Elements Analysis on Coating – As per ASTM F963-17 standard Consumer Safety Specification for Toy Safety	Not Applicable (See Note 3)
Tested Components of Submitted Samples	Toxic Elements Analysis in Substrate – As per ASTM F963-17 standard Consumer Safety Specification for Toy Safety	Pass (#1)

Authorized By:
On behalf of Intertek Testing Services
Taiwan Limited

Matt Wang
Sr. Manager



Signed by:

Thomas Chou

Thomas Chou
Manager



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TEST REPORT

Number : TWNH00087424

Conclusion:

<u>Tested sample</u>	<u>Standard</u>	<u>Result</u>
Submitted Samples	Total Lead (Pb) Content in Surface Coating – As per U.S. Consumer Product Safety Improvement Act 2008, Title I, Section 101	Not Applicable (See Note 3)
Tested Components of Submitted Samples	Total Lead (Pb) Content in Non-Surface Coating Materials (Substrate) – As per U.S. Consumer Product Safety Improvement Act 2008, Title I, Section 101	Pass (#1)
	Phthalates Content – As per US 16 CFR Part 1307 for Prohibition of Children's Toys and Child Care Articles Containing Specified Phthalates	Pass (#1)
	– As per California Proposition 65 was quoted from the Consent Judgement no. BG-350969 settled by the Superior Court of the state of California for the County of Alameda, for toys based on the California Proposition 65	Pass (#1)

Authorized By:
On behalf of Intertek Testing Services
Taiwan Limited

Matt Wang
Sr. Manager



Signed by:

Thomas Chou

Thomas Chou
Manager



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TEST REPORT

Number : TWNH00087424

Note 1 : The attention of the applicant is drawn to the need for the item to be labeled as below

- Toys made available on the market shall bear the CE marking. The CE marking shall be subject to the general principles set out in Article 30 of Regulation (EC) No 765/2008. The CE marking shall be affixed visibly, legibly and indelibly to the toy, to an affixed label or to the packaging. In the case of small toys and toys consisting of small parts, the CE marking may alternatively be affixed to a label or an accompanying leaflet. Where, in the case of toys sold in counter displays, that is not technically possible, and on condition that the counter display was originally used as packaging for the toy, the CE marking may be affixed to the counter display. Where the CE marking is not visible from outside the packaging, if any, it shall as a minimum be affixed to the packaging. Where specific legislation does not impose specific dimensions, the CE marking shall be at least 5 mm high.
- The manufacturer's name, registered trade name or registered trade mark and the address at which the manufacturer can be contacted shall be indicated on the toy or, where that is not possible, on its packaging or in a document accompanying the toy. This requirement applies also to the name and address etc. of any importer.
- 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.
- Manufacturers and importers shall ensure that the toy is accompanied by instructions and safety information in a language or languages easily understood by consumers, as determined by the Member State concerned.
- A Member State may, within its territory, stipulate that warnings and safety instructions shall be written in a language or languages easily understood by consumers, as determined by that Member State.

If this information is not fixed to the toy itself, it should be accompanied by a notice in advising the purchaser to retain it.

Note 2 : Applicant is drawn to the attention that the name and address of producer, importer or distributor and the advice statement of keeping relevant information of the toy shall appear on it as specified in section 7.1 of ASTM F963-17.

Note 3 : Since no scrapable surface coating was found on the submitted samples, the testing scope was ~~not applicable to the submitted samples.~~

Authorized By:
On behalf of Intertek Testing Services
Taiwan Limited

Matt Wang
Sr. Manager



Signed by:

Thomas Chou

Thomas Chou
Manager



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TEST REPORT

Number : TWNH00087424

Test Conducted

1. Mechanical and Physical Properties

As per European standard on safety of toys EN 71 part 1:2014 + A1 : 2018

Appropriate age group for testing #2 : For ages over 3 years

<u>Clause</u>	<u>Testing item</u>	<u>Assessment</u>
4*	General requirements	P
5	Toys intended for children under 36 months	NA
6	Packaging	NA
7*	Warnings, markings and instructions for use	P#2 (See Note 1)

Remarks : P = Pass ; NA = Not applicable

2 = The applicant has certified that proper age grading, label and marking will put on the final product, and the age grading, label and marking certified meet the requirement of this standard. It is applicant's responsibility to make sure the final product with the age grading, label and marking as certified.

* = The following subclauses of the standard are found applicable :

- 1) 4.1 Material cleanliness
- 2) 4.7 Edges
- 3) 4.8 Points and metallic, wires
- 4) 7.2 Toys not intended for children under 36 months

2. Flammability Test

As per European standard on safety of toys EN 71 part 2 : 2011+A1:2014.

<u>Clause</u>	<u>Testing item</u>	<u>Assessment</u>
4.1	General	
	– Cellulose nitrate	P
	– Pile surface	NA
	– Flammable gas and liquid	NA
4.2	Toys to be worn on the head (5.2/5.3/5.4)	NA
4.3	Toy disguise costumes and toys intended to be worn by a child in play (5.4)	NA
4.4	Toys intended to be entered by a child (5.4)	NA
4.5	Soft-filled toys(5.5)	NA

Remarks : P = Pass
NA = Not applicable



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TEST REPORT

Number : TWNH00087424

Test Conducted

3. 19 Toxic Element Migration Test

As per EN 71-3: 2019 and followed by High Performance Liquid Chromatography-Photodiode Array Detector (HPLC-DAD), Liquid Chromatography /Inductively Coupled Plasma Mass Spectrometer (LC/ICP-MS), Inductively Coupled Plasma-Optical Emission Spectrometer (ICP-OES), Inductively Coupled Plasma Mass Spectrometer (ICP-MS) and Gas Chromatography-Mass Spectrometer (GC-MS), if necessary.

Category III: Scraped-off toy material

Element	Result (mg/kg)			Detection Limit	Limit
	(1)	(2)	(3)	(mg/kg)	(mg/kg)
Aluminium (Al)	ND	ND	ND	300	70000
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	ND	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	10	180000
Organic tin	ND	ND	ND	3.0	12
Zinc (Zn)	ND	ND	ND	100	46000

Remarks: ND = Not detected

- Organic tin test result was expressed as tributyl tin.
- The new aluminium (Al) migration limits [(2250 mg/kg for category (I), 560 mg/kg for category (II) and 28130 mg/kg for category (III)] were quoted from directive (EU) 2019/1922 amending 2009/48/EC effective from 20 May 2021.
- According to the annex F to EN 71-3: 2019, the content of chromium (III) from the migration solution was calculated through the formula: chromium (III) = total chromium – chromium(VI).
- The scope of confirmation test for organic tin includes methyl tin, butyl tin, dibutyl tin, tributyl tin, tetrabutyl tin, n-octyl tin, di-n-octyl tin, di-n-propyl tin, diphenyl tin, triphenyl tin, trimethyltin, dimethyltin, tricyclohexyltin and trioctyltin and reports the total value after converted to tributyl tin.



TEST REPORT

Number : TWNH00087424

Test Conducted

4. Phthalates Content

By solvent extraction and determined by Gas Chromatography-Mass Spectrometer (GC-MS).

I. Entry 51 of Annex XVII to Regulation (EC) No 1907/2006:

<u>Compound</u>	<u>Result (%)</u> <u>(1/2/3)</u>	<u>Limit (%)</u>
Diethyl hexyl phthalate (DEHP)	ND	0.1
Dibutyl phthalate (DBP)	ND	0.1
Benzyl butyl phthalate (BBP)	ND	0.1
Diisobutyl phthalate (DIBP)	ND	0.1
Sum of DEHP, DBP, BBP & DIBP	ND	0.1

II. Entry 52 of Annex XVII to Regulation (EC) No 1907/2006:

<u>Compound</u>	<u>Result (%)</u> <u>(1/2/3)</u>	<u>Limit (%)</u>
Di-(iso-nonyl) phthalate (DINP)	ND	--
Di-(Iso-decyl) phthalate (DIDP)	ND	--
Di-(n-octyl) phthalate (DNOP)	ND	--
Sum of DINP, DIDP & DNOP	ND	0.1

Remarks: % = Percentage based on weight of tested sample
ND = Not detected

Detection limit = 0.005% (for each compound)

The above limits are quoted from Annex XVII Items 51 and Items 52 of the REACH regulation (EC) No. 1907/2006 and it's amendment (EU) 2018/2005.



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TEST REPORT

Number : TWNH00087424

Test Conducted

5. Physical And Mechanical Properties

As per ASTM F963-17 standard consumer safety specification for toy safety.

Age labeling on package / toy : None

Is age label appropriate * 1 : No

Age grading specified by applicant for testing #2 : For ages over 2 years

Section	Testing items	Assessment
4.1	Material quality (visual check on cleanliness)	P
4.3.7	Stuffing material (visual check on contaminations)	NA 4.5
*	Sound-producing toys	NA
4.6	Small objects	
4.6.1 *	Toys intended for children under 36 months	P
4.6.2	Mouth-actuated toys	NA
4.6.3	Toys and games for 36 months to 72 months	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	NA
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
4.16	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 *	Projectiles toys	NA
4.22 *	Teethers and teething toys	NA
4.23 *	Rattles	NA
4.24	Squeeze toys	NA
4.25 *	Battery-operated toys	NA
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



TEST REPORT

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Test Conducted

5. Physical And Mechanical Properties

Section	Testing items	Assessment
4.31	Balloons	NA
4.32	Certain toys with nearly spherical ends	NA
4.33	Marbles	NA
4.34	Balls	NA
4.35	Pompoms	NA
4.36	Hemispheric-shape 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
5.	Labeling requirements	P#2
6.	Instructional literature	NA
7.	Producer's markings	See Note 2

Remarks :

- * = The submitted samples were tested in accordance with the requirements of section 8.5 through section 8.23 e.g. Normal use testing, drop test, torque test, tension test, compression test, flexure test etc. whichever is applicable.
- * 1 = Reference material CPSC's age determination guidelines 2002 and ASTM F963-17 annex A1. The most stringent test is applied if the toy or its package is not age labeled in a clear and conspicuous manner, or, based on such factors as marketing practiced and the customary patterns of usage of the toy.
- P = Pass
- NA = Not applicable
- #2 = The applicant has certified that proper age grading, label and marking will put on the final product, and the age grading, label and marking certified meet the requirement of this standard. It is applicant's responsibility to make sure the final product with the age grading, label and marking as certified.



TEST REPORT

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Test Conducted

6. Flammability Test

As per section 4.2 of ASTM F963-17 standard consumer safety specification on toy safety.

Specimen	Burn length (inch)	Time (second)	Burn rate (inch/second)	Round burn rate (inch/second)	Limit (inch/second)	Assessment
Submitted Samples	-	-	IBE	-	0.10	P

Remarks : P = Pass
IBE = Ignite but self-extinguished

In order to pass this criteria the test product shall meet one of the following conditions :

A) Have burn rate of less than 0.10 inch/second. (Round the burn rate to the nearest tenth ,that is round 0.04 up to 0, 0.06 up to 0.10, 0.15 up to 0.2)

B) DNI = Did not ignite.

C) IBE = Ignited but self-extinguished in a very short period which cannot be measured accurately.

7. Toxic Elements Analysis in Substrate

As per section 8.3.5 of the ASTM F963-17 and CPSIA test method: CPSC-CH-E1001-08.3 (metal substrates) and CPSC-CH-E1002-08.3 (non-metal substrates), acid digestion and extraction methods were used and toxic elements content were determined by Inductively Coupled Plasma-Optical Emission Spectrometer (ICP-OES) and Atomic Absorption Spectrophotometer (AAS).

Element	Result (mg/kg)			Detection Limit	Limit
	(1)	(2)	(3)	(mg/kg)	(mg/kg)
Tot. Lead (Pb)	ND	ND	ND	20	100
Sol. Lead (Pb)	ND	ND	ND	5	90
Sol. Cadmium (Cd)	ND	ND	ND	5	75
Sol. Antimony (Sb)	ND	ND	ND	5	60
Sol. Chromium (Cr)	ND	ND	ND	5	60
Sol. Barium (Ba)	ND	ND	ND	5	1000
Sol. Mercury (Hg)	ND	ND	ND	5	60
Sol. Selenium (Se)	ND	ND	ND	5	500
Sol. Arsenic (As)	ND	ND	ND	2.5	25

Remarks: Sol. = Soluble
Tot. = Total
ND = Not detected

The results of soluble elements content were adjusted by subtracting analytical correction factor.



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TEST REPORT

Number : TWNH00087424

Test Conducted

8. Total Lead (Pb) Content in Non-Surface Coating Materials (Substrate)

According to CPSIA test method: CPSC-CH-E1002-08.3(non-metal) and CPSC-CH-E1001-08.3(metal), by acid digestion and Atomic Absorption Spectrophotometer (AAS) analysis.

<u>Tested Component</u>	<u>Result (ppm)</u>	<u>Limit (ppm)</u>
(1)	ND	100
(2)	ND	100
(3)	ND	100

Remarks: ppm = Parts per million based on weight of tested sample = mg/kg
ND = Not detected
Detection limit = 20 ppm

9. Phthalates Content

With reference to CPSIA test method: CPSC-CH-C1001-09.4, by solvent extraction and Gas Chromatographic-Mass Spectrometric (GC-MS) analysis.

<u>Compound</u>	<u>Result (%)</u> <u>(1/2/3)</u>	<u>Limit</u> <u>A (%) Limit^B (%)</u>	
Diethyl hexyl phthalate (DEHP)	ND	0.1	0.1
Benzyl butyl phthalate (BBP)	ND	0.1	0.1
Dibutyl phthalate (DBP)	ND	0.1	0.1
Di-iso-decyl phthalate (DIDP)	ND	--	0.1
Di-iso-nonyl phthalate (DINP)	ND	0.1	--
Di-iso-butyl phthalate (DIBP)	ND	0.1	--
Di-n-pentyl phthalate (DPENP)	ND	0.1	--
Di-n-hexyl phthalate (DHEXP, DnHP)	ND	0.1	0.1
Dicyclohexyl phthalate (DCHP)	ND	0.1	--

Remarks: % = Percentage based on weight of tested sample
ND = Not detected
Detection limit = 0.010 %

A = Limit of US 16 CFR part 1307

B = Limit of California Proposition 65

The above limit was quoted from the Consent Judgement No. BG-350969 settled by the Superior Court of the state of California for the county of Alameda, for toys based on the California Proposition 65.

Tested Components :

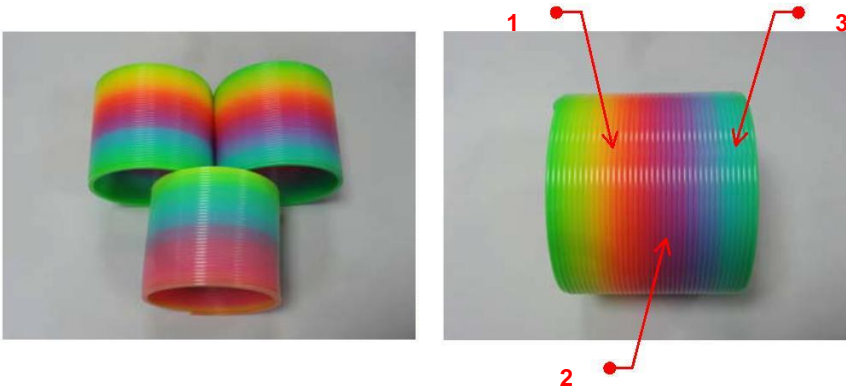
- (1) Yellow/orange plastic spring
- (2) Pink/purple plastic spring
- (3) Blue/green plastic spring



TEST REPORT

Number : TWNH00087424

Sample photo:



End of Report

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