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检测
TESTING
CNAS L1114

TEST REPORT

Client: ThinkFun Inc.
Address: 1321 Cameron St, Alexandria Virginia USA 22314

REPORT NO: C80081883
DATE: January 30, 2018

Attn: Kirsten Bloxom

Sample Description: Tail Spin
Quantity Submitted: 6 pieces
Style No.: 5840
PO No.: Not provided
Labeled Age Grading: Ages 8 to adult
Test Age Grading: Ages 8 to adult
Destination: USA, Europe, Canada
Country of Origin: China
Date(s) of samples received: January 17, 2018

TEST METHOD & RESULTS: Please refer to next page(s)

CONCLUSION: Please refer to page two(2)

*****Page 1 of 14*****

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SZ-FAF-001 (2017-10-12)



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CONCLUSION:

ASTM F963-16 Physical & Mechanical Requirements	PASS
16 CFR 1500 Physical & Mechanical Requirements	PASS
Canada Toys Regulations SOR/2011-17 And Regulations Amending Toys Regulations SOR/2016-195 &SOR/2016-302 Physical And Mechanical Requirements	PASS
EN 71-1:2014 Mechanical & Physical Properties	PASS
ASTM F963-16 Flammability Requirements	PASS
16 CFR 1500.3 (c) (6) (vi) / 16 CFR 1500.44 Flammability Requirements	PASS
Canada Toys Regulations SOR/2011-17 And Regulations Amending Toys Regulations SOR/2016-195 &SOR/2016-302 Flammability Requirements (Cellulose Nitrate And Celluloid)	PASS
EN 71-2:2011+A1:2014 Flammability	PASS
Flammability Requirements For Textile Fibres: SOR/2016-194	NOT APPLICABLE#
ASTM F963-16 Clause 4.3.5.1 (2) Elements Migration in surface coating	NOT APPLICABLE#
ASTM F963-16 Clause 4.3.5.2 (2) (b) Elements Migration in substrate	NOT APPLICABLE#
ASTM F963-16 Clause 4.3.5.2 (2) (c) Soluble Cadmium in metallic Small Part	NOT APPLICABLE#
16 CFR 1303 Total Lead Content Requirements	NOT APPLICABLE#
ASTM F963-16 Clause 4.3.5.1 (1) Total Lead in Surface Coating	NOT APPLICABLE#
ASTM F963-16 Clause 4.3.5.2 (2) (a) Total Lead in Substrate	PASS
Canada Toys Regulations SOR/2011-17 and Regulations Amending Toys Regulations SOR/2016-195 &SOR/2016-302 Heavy Metal Content Requirements	NOT APPLICABLE#
Consumer Product Safety Improvement Act of 2008 Total Lead Content Requirement [Paint or Surface Coating]	NOT APPLICABLE#
Consumer Product Safety Improvement Act of 2008 Total Lead Content Requirement [Substrate Materials]	PASS
Canada Consumer Products Containing Lead (Contact mouth) regulation	NOT APPLICABLE#
Total Cadmium Content and European Reach Regulation Annex XVII	PASS
Client's Requirement with reference to Consumer Product Safety Improvement Act of 2008 Total Phthalate Requirement	NOT APPLICABLE#
Total Phthalate and European Reach Regulation Annex XVII	PASS
Phthalates Content With Reference To California Proposition 65 Requirement	PASS
Canada Phthalates regulations SOR 2016-188	NOT APPLICABLE#
NERC (Formerly Organization: CSG) Model Legislation – Toxics in Packaging Clearinghouse (TPCH), as revised December 1998 & October 2004	PASS
94/62/EC Heavy Metals Requirements on Packaging and Packaging Waste	PASS

#: There is no component on the submitted test samples under the testing scopes.

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For and on behalf of :
UL VS Shanghai Limited Shenzhen Branch

David Mo

Lulu Yang

David Mo
Assistant Manager- Toys Department

Lulu Yang
Senior Technical Officer
Chemical Department

Important Notes :

The results only relate to the samples tested.

The below tests are except from the ILAC-MRA/CNAS accreditation scope:

1. NERC (Formerly Organization: CSG) Model Legislation – Toxics in Packaging Clearinghouse (TPCH), as revised December 1998 & October 2004
2. 94/62/EC Heavy Metals Requirements on Packaging and Packaging Waste
3. Phthalates Content With Reference To California Proposition 65 Requirement
4. Canada Toys Regulations SOR/2011-17 And Regulations Amending Toys Regulations SOR/2016-195 &SOR/2016-302 Physical And Mechanical Requirements
- 5.Canada Toys Regulations SOR/2011-17 And Regulations Amending Toys Regulations SOR/2016-195 &SOR/2016-302 Flammability Requirements (Cellulose Nitrate And Celluloid)
- 6.Canada Toys Regulations SOR/2011-17 and Regulations Amending Toys Regulations SOR/2016-195 &SOR/2016-302 Heavy Metal Content Requirements
7. Client’s Requirement with reference to Consumer Product Safety Improvement Act of 2008 Total Phthalate Requirement

*****Page 3 of 14*****

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TEST REPORT

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TEST RESULTS

1. MECHANICAL AND PHYSICAL TEST

1.1 AS PER ASTM STANDARD CONSUMER SAFETY SPECIFICATION FOR TOYS SAFETY F963-16

The following clauses are identified to be applicable:

Age grading for testing : Ages 8 to adult
Samples Quantity : 1 style x 1 piece

<u>Clause</u>	<u>Test Items</u>	<u>Assessment</u>
4.1	Material(visual check on cleanness)	P
4.7	Accessible Edges	P [#]
4.9	Accessible Points	P [#]
4.11	Nails and Fasteners	P
5	Safety Labeling Requirements	P
6	Instructional Literature	P
7	Producer's Markings	P

Remark: P=Pass

#: Section 4.7 Accessible Edges and Section 4.9 Accessible Points are only applicable for toys children under 96 months, and the assessment was for reference only.

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SZ-FAF-001 (2017-10-12)



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REPORT NO: C80081883
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TEST RESULTS

1.2 AS PER 16 CFR 1500.50, THE HAZARDS OF SHARP POINTS, SHARP EDGE AND SMALL PARTS ARE ASSESSED BOTH BEFORE AND AFTER APPLICABLE USE AND ABUSE TESTS:

The following clauses are identified to be applicable:

Age grading for testing: Ages 8 to adult
Samples Quantity: 1 style x 1 piece

<u>TEST ITEMS</u>	<u>SHARP POINT</u>	<u>SHARP EDGE</u>
	(1500.48)	(1500.49)
As received	P [#]	P [#]

Remark: P = Pass

#: The Mechanical and Physical Tests Requirements of U.S. Consumer Products Safety Commission for Toys and Articles intended for use by the children Specified in U.S. Code of Federal Regulations Title 16, Part 1500.48 and 1500.49 are only for children under 8 years of age. Only As Received Sharp Point and Sharp Edge were assessed, and the assessment was for reference only.

*****Page 5 of 14*****

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SZ-FAF-001 (2017-10-12)



中国认可
国际互认
检测
TESTING
CNAS L1114

TEST REPORT

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REPORT NO: C80081883
DATE: January 30, 2018

TEST RESULTS

1.3 AS PER CANADA TOYS REGULATIONS SOR/2011-17 AND REGULATIONS AMENDING TOYS REGULATION SOR/2016-195 & SOR/2016-302

The following clauses are identified to be applicable:

Age grading for testing : Ages 8 to adult
Samples Quantity : 1 style x 1 piece

<u>(A)</u>	<u>Test Items</u>	<u>Assessment</u>
8	Exposed Metal Edges	P
9	Ends	P
10	Exposed Plastic Parts	P
13	Fasteners	P

Remark: P = Pass

*****Page 6 of 14*****

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检测
TESTING
CNAS L1114

TEST REPORT

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REPORT NO: C80081883
DATE: January 30, 2018

TEST RESULTS

1.4 AS PER EUROPEAN STANDARDS ON SAFETY OF TOYS EN 71-1:2014

Applicant Specified Age Grading for testing: Ages 8 to adult

Sample size: 1 style x 1 piece

<u>Clause</u>	<u>Test Items</u>	<u>Assessment</u>
4.1	Material cleanliness	P
4.7	Edges	P
4.8	Points and metallic wires	P

Remarks: P=Pass

Warnings and safety instructions shall be written in the languages easily understood by consumers of the country in which the toy is to be sold. Only English version was reviewed.

*****Page 7 of 14*****

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SZ-FAF-001 (2017-10-12)



中国认可
国际互认
检测
TESTING
CNAS L1114

TEST REPORT

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REPORT NO: C80081883
DATE: January 30, 2018

TEST RESULTS

2. FLAMMABILITY TEST

2.1 AS PER ASTM STANDARD ON SAFETY OF TOYS F963-16 ANNEX A5:

Samples Quantity: 1 style x 1 piece
Requirement: Burning rate should not exceed 0.1 inch per second along the major axis.
Results: The sample was tested to be ignited but extinguished.

2.2 AS PER U.S. CODE OF FEDERAL REGULATIONS TITLE 16 PART 1500.44 FOR RIGID AND PLIABLE SOLIDS defined under 16 CFR 1500.3 section (c) (6) (vi):

Samples Quantity: 1 style x 1 piece
Requirement: Burning rate should not exceed 0.1 inch per second along the major axis.
Results: The sample was tested to be ignited but extinguished.

2.3 AS PER CANADA TOYS REGULATIONS SOR/2011-17 AND REGULATIONS AMENDING TOYS REGULATIONS SOR/2016-195 & SOR/2016-302 SECTION 21 (CELLULOSE NITRATE AND CELLULOID)

Requirement: Celluloid (cellulose nitrate) and materials with the same behaviour in fire (except when used in varnish or paint) shall not be used in the manufacture of toys.
Results: The submitted sample(s) complied with this requirement.

2.4 AS PER EUROPEAN STANDARD ON SAFETY OF TOYS EN 71-2:2011+ A1:2014 SECTION 4.1 GENERAL REQUIREMENT (CELLULOSE NITRATE):

Requirement: Celluloid (cellulose nitrate), except when used in varnish, paint or glue, or in balls of the type used for table tennis or similar games, and materials with the same behaviour in fire as celluloid, shall not be used in the manufacture of toys.
Results: The submitted sample(s) complied with this requirement.

Date(s) of test(s) conducted: January 22, 2018 to January 25, 2018

*****Page 8 of 14*****

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DATE: January 30, 2018

TEST RESULTS

3. CHEMICAL TESTS:

Key to sample(s):

- Sample 1 = Silvery metal (screw)
- Sample 2 = Multicolor coatings (sell card)
- Sample 3 = White surfaced grey paper card excluding multicolor coatings (sell card)
- Sample 4 = Transparent plastic (blister)
- Sample 5 = Transparent plastic (tray inside blister)
- Sample 6 = Transparent blue plastic (body)
- Sample 7 = White plastic (body)

3.1 TOTAL LEAD CONTENT TEST: SUBSTRATE

Requirement: The submitted samples must meet the Total Lead Limit of 100ppm as per Consumer Product Safety Improvement Act of 2008

Test method: CPSC-CH-E1001-8.3 Standard operating procedure for determining total Lead (Pb) in metal children's product (including children's metal jewelry);
CPSC-CH-E1002-8.3 Standard operating procedure for determining total Lead (Pb) in non-metal children's products.

Results:

	<u>Sample 1</u>	<u>Sample 6/7</u>
Total Lead	<10.0	<10.0

All concentrations expressed in milligrams per kilogram
"<" means "less than"

*****Page 9 of 14*****

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3.2 TOTAL LEAD CONTENT TEST: SUBSTRATE

Requirement: As per ASTM F963-16 Clause 4.3.5.2 (2) (a) requirement, lead content in the materials under test shall not exceed of 100ppm.

Test method: CPSC-CH-E1001-8.3 Standard operating procedure for determining total Lead (Pb) in metal;
CPSC-CH-E1002-8.3 Standard operating procedure for determining total Lead (Pb) in non-metal

Results:

	<u>Sample 1</u>	<u>Sample 6/7</u>
Total Lead	<10.0	<10.0

All concentrations expressed in milligrams per kilogram
“<” means “less than”

3.3 TOTAL CADMIUM CONTENT AND EUROPEAN REACH REGULATION ANNEX XVII: WET-ASHING DIGESTION AND DETECTED WITH AAS/ICP & EN1122:2001 (METHOD B) MICROWAVE DIGESTION AND DETECTED WITH AAS/ICP

Results:

Element	Total Cadmium
Limit	< 100
Sample 2	<5.0
Sample 4	<5.0
Sample 5	<5.0
Sample 6/7	<5.0

All concentrations expressed in milligrams per kilogram
“<” means “less than”

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3.4 TOTAL PHTHALATE TEST AND EUROPEAN REACH REGULATION ANNEX XVII

Test Method : EN 14372: 2004

Requirement : DEHP, DBP & BBP content shall not be more than 0.1% by weight in toys and children article.

DINP, DIDP & DNOP content shall not be more than 0.1% by weight in toys and children article that can be placed in the mouth by children.

Results :

Sample ID	Plasticiser Values (w/w)					
	DBP	BBP	DEHP	DNOP	DINP	DIDP
Sample 6/7	ND	ND	ND	ND	ND	ND

Remarks: 1) Detection Limit for each phthalate = 0.005%
2) ND= not detected

Key : DBP = Di-butyl phthalate DEHP = Di (2-Ethylhexyl) phthalate
BBP = Benzyl butyl phthalate DINP = Di-“isonomy” phthalate
DIDP = Di-“isodecyl” phthalate DNOP = Di -n-octal phthalate

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SZ-FAF-001 (2017-10-12)



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检测
TESTING
CNAS L1114

TEST REPORT

Client: ThinkFun Inc.
Address: 1321 Cameron St, Alexandria Virginia USA 22314

REPORT NO: C80081883
DATE: January 30, 2018

TEST RESULTS

3.5 TOTAL PHTHALATE TEST WITH REFERENCE TO CALIFORNIA PROPOSITION 65 (Sacramento Superior Court 07AS04683 / Alameda Superior Court BG07350969 / RG08367601 / RG07351032 / RG08378050)

Test Method : CPSC-CH-C1001-09.3, Standard operating procedure for determination of phthalates.

Requirement : Each of DEHP, DBP, BBP, DIDP, DnHP content shall not be more than 0.1% by weight.

Results :

Sample ID	Plasticiser Values (w/w)				
	DBP	BBP	DEHP	DnHP	DIDP
Sample 6/7	ND	ND	ND	ND	ND

Remarks: 1) Detection Limit for each phthalate = 0.005%
2) ND= not detected

Key : DBP = Dibutyl Phthalate DEHP = Di (2-Ethylhexyl) Phthalate
BBP = Benzyl butyl Phthalate DnHP = Di-n-hexyl phthalate
DIDP = Di-“isodecyl” phthalate

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TEST RESULTS

3.6 NERC (FORMERLY ORGANIZATION: CSG) MODEL LEGISLATION – TOXICS IN PACKAGING CLEARINGHOUSE (TPCH), AS REVISED DECEMBER 1998 & OCTOBER 2004 AND MICROWAVE DIGESTION AND DETECTED WITH AAS/ICP AND WET-ASHING DIGESTION AND DETECTED WITH AAS/ICP

Results:

Elements	Total Cadmium	Hexavalent Chromium	Total Lead	Total Mercury	Pb + Cd + Hg + Cr(VI)
Limits					< 100
Sample 2	<5.0	<10.0	<10.0	<5.0	<30.0
Sample 3	<5.0	<10.0	<10.0	<5.0	<30.0
Sample 4	<5.0	<10.0	<10.0	<5.0	<30.0
Sample 5	<5.0	<10.0	<10.0	<5.0	<30.0

All concentrations expressed in milligrams per kilogram
"<" means "less than"

3.7 HEAVY METALS REQUIREMENTS ON PACKAGING AND PACKAGING WASTE: 94/62/EC & MICROWAVE DIGESTION AND DETECTED WITH AAS/ICP AND WET-ASHING DIGESTION AND DETECTED WITH AAS/ICP

Results:

Elements	Total Cadmium	Hexavalent Chromium	Total Lead	Total Mercury	Pb + Cd + Hg + Cr(VI)
Limits					< 100
Sample 2	<5.0	<10.0	<10.0	<5.0	<30.0
Sample 3	<5.0	<10.0	<10.0	<5.0	<30.0
Sample 4	<5.0	<10.0	<10.0	<5.0	<30.0
Sample 5	<5.0	<10.0	<10.0	<5.0	<30.0

All concentrations expressed in milligrams per kilogram
"<" means "less than"

Date(s) of test(s) conducted: January 22, 2018 to January 29, 2018

*****Page 13 of 14*****

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Product Photo:



***** THE END *****

*****Page 14 of 14*****

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