

Test Report

Date : 2022-03-17

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No. : SP22030101

Applicant : Hayes Specialties Corporation
1761 East Genesee Saginaw, MI 48601-2407

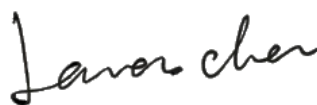
Attn: Michael

Description of Samples : One (1) group of submitted samples said to be:
17512-TOY-Rubber Band Gun- Wooden TOY w/ Rubber Bands
COUNTRY OF ORIGIN: CHINA
AGE GRADING FOR TESTING: 3+

Date Samples Received : 2022-03-07

Date Tested : 2022-03-07 to 2022-03-15

Requirements	Conclusion
1. ASTM Standard Consumer Safety Specification For Toy Safety F 963-17 - physical and mechanical test - flammability test - heavy metal test	Pass
2. US Consumer Product Safety Improvement Act - Total Lead content in substrate in accordance with Sec. 101(a). - Phthalates content in accordance with Sec 108 and 16 CFR 1307.	Pass
3. The Total Lead content requirements according to the California Proposition 65	Pass
4.The BBP, DBP, DEHP, DnHP, DINP and DIDP content requirements according to the California Proposition 65.	Pass
5.Total cadmium content requirements according to the California Proposition 65.	Pass
6.The Total Lead content requirements according to Illinois Public Act 095-1019	Pass
7.The Phthalates content requirements according to California Assembly Bill NO.1108	Pass
8. San Francisco Health Code - Phthalates content in accordance with Article 34, sec 34.2	Pass



CHEN Lufeng, James
Authorized Signatory



STC (Shanghai) Company Limited

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The following test item(s) was/were performed on submitted sample(s) and/or components confirmed by applicant.

Item No.	Component Description
<u>Coating materials:</u>	
<u>1</u>	Coating on gun:red* ³
<u>Plastic materials:</u>	
<u>2</u>	Plastic on gun:black
<u>Rubber materials:</u>	
<u>3</u>	Elastic:yellow
<u>4</u>	Elastic:red
<u>5</u>	Elastic:green
<u>Others materials:</u>	
<u>6</u>	Wood:brown

Test Results:

1. ASTM Standard Consumer Safety Specification for Toy Safety F 963-17

AGE GRADING:

The sample was appropriately age graded with the marking of “3+”.

AGE GRADING FOR TESTING:

36 months and up.

1.1 Mechanical and physical hazards of the submitted sample

Ref.: ASTM F 963-17

Applicable requirements before and after use and abuse testing:

<u>Applicable</u>	<u>Description</u>	<u>Result</u>
<u>Section</u>	<u>Description</u>	<u>Result</u>
4	<u>Safety requirements</u>	----
4.1	Material Quality	Pass
4.2	Flammability	Pass* ¹
4.7	Accessible Edges	Pass
4.9	Accessible Points	Pass
4.12	Plastic Film	Pass
4.21	Projectile Toys	Pass
4.30	Toy Gun Marking	Pass
5	<u>Labeling Requirements</u>	----
5.2	Age grading labeling	Pass
5.16	Promotional Materials	Pass
7	<u>Producer’s Markings</u>	----
7.1	Producer’s Name and Address	Pass

*¹=Please refer to section 1.2 of this report for details.

Use and abuse testing:

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<u>Applicable Section</u>	<u>Description</u>	<u>Test Condition</u>
8.7	Drop Tests	4 drops at 3 ft.
8.8	Torque Tests	4 in-lbs or $\pm 180^\circ$
8.9	Tension Tests	15 lbs.
8.10	Compression Tests	30 lbs.

1.2 Flammability test for solids and soft toys

Ref.: ASTM F963-17 Section 4.2

Method used: FHSA 16CFR 1500.44

Result: Pass

<u>Sample</u>	<u>Burn rate (in/sec.)</u>
gun	DNI

DNI = Did not ignite

Note: In accordance with the FHSA, the burn rate should not be greater than 0.1 in. per second.

1.3 Heavy metal test

Ref.: ASTM F963-17 Section 4.3.5

Method: ASTM F963-17 Section 8.3

Determined by: Inductively Coupled Plasma-Optical Emission Spectrometer

4.3.5.1 Paint and similar surface-coating

Total lead analysis

<u>Sample</u>	<u>Result</u>	<u>Limit</u>
<u>1</u>	11ppm	90ppm

Soluble metals test:

*³ = There were insufficient materials to produce the test portion of 100 mg in one sample. According to the Standard, the quantities of the elements were calculated as if 100 mg of test portion had been used. The actual weight of the specified materials used for analysis were shown below :

1 Coating on gun: red (37.0mg)

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Test Results:

	<u>1</u>	<u>Limit</u>
Soluble lead.....	<5ppm	90ppm
Soluble cadmium.....	<5ppm	75ppm
Soluble chromium.....	<5ppm	60ppm
Soluble barium.....	19ppm	1000ppm
Soluble antimony.....	<5ppm	60ppm
Soluble arsenic.....	<2ppm	25ppm
Soluble mercury.....	<5ppm	60ppm
Soluble selenium.....	<5ppm	500ppm

4.3.5.2 Toys Substrate Materials

Total lead test

<u>Sample</u>	<u>Result</u>	<u>Limit</u>
<u>2</u>	12ppm	100ppm
<u>3+4+5</u>	<10ppm	100ppm
<u>6</u>	<10ppm	100ppm

Soluble metals test:

	<u>2</u>	<u>3</u>	<u>4</u>	<u>Limit</u>
Soluble lead.....	<5ppm	<5ppm	<5ppm	90ppm
Soluble cadmium.....	<5ppm	<5ppm	<5ppm	75ppm
Soluble chromium.....	<5ppm	<5ppm	<5ppm	60ppm
Soluble barium.....	<5ppm	<5ppm	<5ppm	1000ppm
Soluble antimony.....	<5ppm	<5ppm	<5ppm	60ppm
Soluble arsenic.....	<2ppm	<2ppm	<2ppm	25ppm
Soluble mercury.....	<5ppm	<5ppm	<5ppm	60ppm
Soluble selenium.....	<5ppm	<5ppm	<5ppm	500ppm

	<u>5</u>	<u>6</u>	<u>Limit</u>
Soluble lead.....	<5ppm	<5ppm	90ppm
Soluble cadmium.....	<5ppm	<5ppm	75ppm
Soluble chromium.....	<5ppm	<5ppm	60ppm
Soluble barium.....	<5ppm	9ppm	1000ppm
Soluble antimony.....	<5ppm	<5ppm	60ppm
Soluble arsenic.....	<2ppm	<2ppm	25ppm
Soluble mercury.....	<5ppm	<5ppm	60ppm
Soluble selenium.....	<5ppm	<5ppm	500ppm

Note: < denotes less than.

2. US Consumer Product Safety Improvement Act

2.1 Children's products containing lead - Total Lead content in paint and surface coating

Ref.: CPSIA Sec 101(f) and 16 CFR 1303

Determined by: Inductively Coupled Plasma-Optical Emission Spectrometer

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Test Results:

<u>Sample</u>	<u>Result</u>	<u>Limit</u>
<u>1</u>	11ppm	90ppm

Note: < denotes less than.

2.2 Children's products containing lead - Total Lead content in substrate

Ref.: CPSIA Sec 101(a)

Test method: CPSC-CH-E1002-08.3

Determined by: Inductively Coupled Plasma-Optical Emission Spectrometer

<u>Sample</u>	<u>Result</u>	<u>Limit</u>
<u>2</u>	12ppm	100ppm
<u>3+4+5</u>	<10ppm	100ppm
<u>6</u>	<10ppm	100ppm

Note: < denotes less than.

2.3 Phthalates content

Ref.: CPSIA Sec 108 and 16 CFR 1307

Determined by: Gas Chromatography with Mass Selective Detector

<u>Test Item</u>	<u>CAS No.</u>	<u>Result(ppm)</u>				<u>Limit (ppm)</u>
		<u>1</u>	<u>2</u>	<u>3+4+5</u>	<u>6</u>	
Di-n-butyl phthalate (DBP)	84-74-2	<100	<100	<100	<100	1000
Benzyl-n-butyl phthalate (BBP)	85-68-7	<100	<100	<100	<100	1000
Di (2-ethylhexyl) phthalate (DEHP)	117-81-7	255	114	466	<100	1000
Diisononyl phthalate (DINP)	28553-12-0	<100	<100	<100	<100	1000
Di-n-Hexyl phthalate (DnHP)	84-75-3	<100	<100	<100	<100	1000
Di-isobutyl phthalate(DIBP)	84-69-5	<100	<100	<100	<100	1000
Di-n-penty1 phthalate(DPENP)	131-18-0	<100	<100	<100	<100	1000
Di-cyclohexyl phthalate(DCHP)	84-61-7	<100	<100	<100	<100	1000

Note: < denotes less than.

3. The Total Lead Content

Ref.: California Proposition 65

Test method: CPSC-CH-E1003-09.1 & CPSC-CH-E1002-08.3

Determined by: Inductively Coupled Plasma-Optical Emission Spectrometer

<u>Sample</u>	<u>Result</u>	<u>Limit</u>
<u>1</u>	11ppm	90ppm
<u>2</u>	12ppm	100ppm
<u>3+4+5</u>	<10ppm	100ppm
<u>6</u>	<10ppm	100ppm

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Test Results:

Note: < denotes less than.

4. The BBP, DBP, DEHP, DnHP, DINP and DIDP content

Ref.: California Proposition 65

Determined by: Gas Chromatography with Mass Selective Detector

	1	2	3+4+5	6
Di-n-butyl phthalate (DBP)	<100ppm	<100ppm	<100ppm	<100ppm
Benzyl-n-butyl phthalate (BBP)	<100ppm	<100ppm	<100ppm	<100ppm
Di (2-ethylhexyl) phthalate(DEHP)	255ppm	114ppm	466ppm	<100ppm
Di-n-Hexyl phthalate (DnHP)	<100ppm	<100ppm	<100ppm	<100ppm
Di-iso-nonyl phthalate(DINP)	<100ppm	<100ppm	<100ppm	<100ppm
Di-iso-decyl phthalate(DIDP)	<100ppm	<100ppm	<100ppm	<100ppm

Requirement: Each of the above phthalates shall not be greater than 1000ppm by mass of the tested material.

Note: < denotes less than.

5. The Total cadmium content

Ref.: California Proposition 65

Determined by: Inductively Coupled Plasma-Optical Emission Spectrometer

<u>Sample</u>	<u>Result</u>	<u>Limit</u>
<u>1</u>	6ppm	75ppm
<u>2</u>	<5ppm	75ppm
<u>3+4+5</u>	<5ppm	75ppm
<u>6</u>	<5ppm	75ppm

Note: < denotes less than.

6. The Total Lead Content requirements according to Illinois Public Act 095-1019

Test method: CPSC-CH-E1003-09.1 & CPSC-CH-E1002-08.3

Determined by: Inductively Coupled Plasma-Optical Emission Spectrometer

<u>Sample</u>	<u>Result</u>	<u>Limit</u>
<u>1</u>	11ppm	40ppm
<u>2</u>	12ppm	40ppm
<u>3+4+5</u>	<10ppm	40ppm
<u>6</u>	<10ppm	40ppm

Note: < denotes less than.

7. Phthalates content

Ref.: California Assembly Bill NO.1108

Determined by: Gas Chromatography with Mass Selective Detector

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Test Results:

A. Any toy or children article

Test Item	CAS No.	Result(ppm)				Limit(ppm)
		1	2	3+4+5	6	
Dibutyl phthalate(DBP)	84-74-2	<100	<100	<100	<100	1000
Butyl benzyl phthalate (BBP)	85-68-7	<100	<100	<100	<100	1000
Di -2-ethylhexyl phthalate (DEHP)	117-81-7	255	114	466	<100	1000

B. Any toys and children articles which can be placed in mouth for children under 3 years

Test Item	CAS No.	Result(ppm)				Limit(ppm)
		1	2	3+4+5	6	
Di-n-octyl phthalate(DNOP)	117-84-0	<100	<100	<100	<100	1000
Di-iso-decyl phthalate(DIDP)	26761-40-0	<100	<100	<100	<100	1000
Di-iso-nonyl phthalate(DINP)	28553-12-0	<100	<100	<100	<100	1000

Note: < denotes less than.

8. Phthalates content

Ref.: San Francisco Health Code Article 34, sec 34.2

Determined by: Gas Chromatography with Mass Selective Detector

	1	2	3+4+5	6
Di-n-butyl phthalate (DBP)	<100ppm	<100ppm	<100ppm	<100ppm
Benzyl-n-butyl phthalate (BBP)	<100ppm	<100ppm	<100ppm	<100ppm
Di (2-ethylhexyl) phthalate(DEHP)	255ppm	114ppm	466ppm	<100ppm
Di-n-octyl phthalate(DNOP)	<100ppm	<100ppm	<100ppm	<100ppm
Di-iso-nonyl phthalate(DINP)	<100ppm	<100ppm	<100ppm	<100ppm
Di-iso-decyl phthalate(DIDP)	<100ppm	<100ppm	<100ppm	<100ppm

Requirement: Each of the above phthalates shall not be greater than 1000ppm by mass of the tested material.

Note: < denotes less than.

The photo of submitted samples



***** End of Test Report *****

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5. The results in Report apply only to the sample as received and do not apply to the bulk, unless the sampling has been carried out by the Company and is stated as such in the Report. The Clients provide the sample's relevant information, and the Company will not be liable for or accept responsibility for the truth of the sample information.
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