

Test Report

Number: GZHH0038087403

Applicant: ZURU INC.
UNIT 1201-04, 12/F, ENERGY PLAZA,
92 GRANVILLE ROAD, TSIM SHA TSUI EAST,
KOWLOON, HONG KONG

Date: Dec 01, 2020

Attn: LINDA / WENDY

Sample Description:

Five (5) sets of submitted sample said to be :

Item Name : **Zuru Bunch O Balloons**
ZURU BUNCH O BALLOONS-ACCESSORIES-Water Slide
Zuru Bunch O Balloons - Rapid Fill -- Crazy
Zuru Bunch O Balloons - Rapid Fill - Launcher with 3
Zuru X-Shot -Water Warfare- Water Balloons - Balloon Refills
Zuru Bunch O Balloons - Rapid Fill- Water Grenades
Bunch O Balloons - Sling Shot
Marvel Avengers [Bunch O Balloons]
Bunch O Balloons -Launcher With Bunch

Labelled Age Group : "3+", "Ages 5-12", "6+"

Appropriate Age Grading for : Over 3 years

Testing

Packaging Provided by : Yes

Applicant

Vendor : Zuru LLC, Zuru PTY Ltd., Zuru UK Limited, Zuru France,
Zuru Germany GmbH, Zuru Canada Inc., Zuru New Zealand Limited,
Zuru Italy SRL, Zuru Limited

Country of Origin : China

Date Sample Received : Sep 25, 2020 & Oct 13, 2020 & Oct 30, 2020 & Nov 16, 2020 & Nov 18, 2020

Testing Period : Sep 25, 2020 ~ Nov 23, 2020

Tests conducted:

As requested by the applicant, refer to attached page(s) for details.

Conclusion:

<u>Tested sample</u>	<u>Standard</u>	<u>Result</u>
Submitted sample sets	U.S. ASTM F963-17 on Physical and mechanical tests	Pass
	U.S. ASTM F963-17 on Flammability test of materials other than textile materials	Pass
Tested component(s) of submitted sample sets	U.S. ASTM F963-17 on soluble heavy elements test	Pass
	U.S. ASTM F963-17 on total Lead content in non-surface coating	Pass
	U.S. ASTM F963-17 on total Lead content in surface coating	Pass

To be continued



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Conclusion:

<u>Tested sample</u>	<u>Standard</u>	<u>Result</u>
Submitted sample sets	U.S. CFR Title 16 (CPSC Regulations) on Physical and mechanical tests	Pass
	U.S. CFR Title 16 (CPSC Regulations) on Part 1500.3(C)(6)(vi) flammability test on rigid and pliable solids	Pass
Tested component(s) of submitted sample sets	U.S. CFR Title 16 Part 1303 total Lead content	Pass
	U.S. Consumer Product Safety Improvement Act 2008 Title I, Section 101 for total Lead content in surface coating	Pass
	U.S. Consumer Product Safety Improvement Act 2008 Title I, Section 101 for Total Lead content in Non-surface coating materials (substrate)	Pass
	US Consumer Product Safety Improvement Act 2008 Title I, Sec 108(a) & (b)(3) and US 16 CFR Part 1307 for Prohibition of Children's Toys and Child Care Articles Containing Specified Phthalates	Pass

<u>Tested sample</u>	<u>Standard</u>	<u>Result</u>
Submitted sample sets	Canada Consumer Product Safety Act Toys Regulations SOR/2011-17 for mechanical and physical test	Pass
	Canada Consumer Product Safety Act Toys Regulations SOR/2011-17 Section 21	Pass
Tested component(s) of submitted sample sets	Canada Consumer Product Safety Act Toys Regulations SOR/2011-17 Section 23 on toxic elements test	Pass
	Canada Consumer Products Containing Lead Regulations SOR/2018-83	Pass
	Canada Consumer Product Safety Act Phthalates Regulations SOR/2016-188 on phthalate content	See Comment#

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Conclusion:

<u>Tested sample</u>	<u>Standard</u>	<u>Result</u>
Submitted sample sets	EN71-1:2014+A1:2018 for mechanical and physical properties	Pass
	EN71- 2 : 2011+A1:2014 Flammability test	Pass
Tested component(s) of submitted sample sets	EN 71-3:2019 on migration of certain elements and (EU) 2019/1922 amending 2009/48/EC (applies from 20 May 2021) for Aluminium migration	Pass
	Cadmium Content Requirement in Annex XVII Entry 23 of the REACH Regulation (EC) No 1907/2006 and Amendment (EC) No 552/2009, (EU) No 494/2011, (EU) No 835/2012 and (EU) 2016/217	Pass
	Phthalates content requirement in Annex XVII Items 51 & 52 of the REACH Regulation (EC) No. 1907/2006 & Amendment No. 552/2009 & Amendment Commission Regulation (EU) 2018/2005 (formerly known as Directive 2005/84/EC)	Pass
	<u>Test Item</u>	
	Applicant's requirement on other phthalate Content	Pass#
	Applicant's requirement on Phthalate content	Pass#
	Applicant's requirement on 23 specified phthalate content	See Test Conducted 22#

<u>Tested sample</u>	<u>Standard</u>	<u>Result</u>
Submitted sample sets	Australian / New Zealand Standard AS/NZS ISO 8124.1:2019 safety aspects related to mechanical and physical properties	Pass
	Consumer Goods (Projectile Toys) Safety Standard 2020	Pass#
	Australian / New Zealand standard on safety of toys AS/NZS 8124.2:2016 flammability test	Pass
Tested component(s) of submitted sample sets	Australian/New Zealand Standard AS/NZS 8124.3:2012/Amdt 1:2016 for toxic elements test	Pass

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Conclusion:

<u>Tested sample</u>	<u>Standard</u>	<u>Result</u>
Submitted sample sets	International standard ISO 8124-1:2018 - safety aspects related to mechanical and physical properties	Pass

International standard on safety of toys ISO 8124-2 : 2014 flammability test	Pass
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Tested component(s) of submitted sample sets	ISO 8124-3:2020 on migration of certain elements	Pass
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<u>Tested sample</u>	<u>Standard</u>	<u>Result</u>
Tested component(s) of submitted sample sets	Consent Judgment No. RG- 356892 for total Lead content based on the California Proposition 65	Pass

Consent Judgment No. BG-350969 on phthalate content based on the California Proposition 65	Pass#
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Heavy Metals Content Requirement in Directive 94/62/EC and amendments on packaging and packaging waste	Pass#
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Model Toxics in Packaging Legislation on toxic elements test (Toxics in Packaging Clearinghouse TPCH)	Pass#
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Illinois Lead Poisoning Prevention Act 410 ILCS 45 on total Lead content requirement	Pass
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Short Chain Chlorinated Paraffin (C10 - C13) (SCCP) content requirement in Regulation (EU) 2019/1021 on persistent organic pollutants (POPs) content	Pass#
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Conclusion:

<u>Tested sample</u> Tested component(s) of submitted sample sets	<u>Standard</u> Applicant's requirement in Organotin Content	<u>Result</u> Pass#
	Organotin Content Requirement in Annex XVII Entry 20 of the REACH Regulation (EC) No 1907/2006 and Amendment (EC) No 552/2009 and (EU) No 276/2010	Pass#
	Polycyclic Aromatic Hydrocarbons (PAHs) Content Requirement in Annex XVII Entry 50 of the REACH Regulation (EC) No 1907/2006 and Amendment (EC) No 552/2009 and (EU) No 1272/2013	Pass
	Azocolourants Content Requirement In Annex XVII Item 43 Of The REACH Regulation (EC) NO. 1907/2006 & Amendment No. 552/2009 and 126/2013 (Formerly Known As Directive 2002/61/EC)	Pass
	<u>Test Item</u> Client's requirement on free formaldehyde content	Pass

Comment: The testing scope of the following standard was not applicable to the submitted samples. However, the test results of the samples met the related requirements as stated in this report.

: This test in the report is not in the CNAS accredited testing scope.

Remark: All test results stated in the report are quoted from the test report number GZHH0038087402 dated on Nov 23, 2020 since the sample(s) or material(s) of samples is (are) claimed to be identical.

Approved:

陈清海

Albert Chen
Toys Lab Assistant Manager



Approved:

胡敏

Bella Hu
Assistant Supervisor



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Tests Conducted

Label Review

Summary:

Evaluation	Citation / Method	Criteria	Results	Rating
Country of origin marking	19 CFR 134	Shall be marked with the country of origin when imported into the U.S. in a conspicuous place to indicate to the ultimate purchaser in the U.S., the English name of the country of origin. All individually packaged items shall contain the country of origin. All items shipped in bulk or displayed in bulk must contain the country of origin	M	P/#
†* Tracking labels for children's products	Consumer Product Safety Improvement Act of 2008	<p>A permanent and distinguishing mark on the product and its packaging, to the extent practicable, enabling the manufacturer and purchaser to ascertain the name of the manufacturer or private labeler, location and date of production of the product.</p> <p>Verified the presence only. The accuracy of tracking label will not be verified. Note: Effective August 14, 2009 The CPSC has not issued implementing guidance as to the size, location and format of the tracking label. However, the requirement to provide tracking information is mandatory regardless of whether the CPSC provides such guidance after the effective date</p>	<p>M</p> <p>On packaging: ZURU GZ200910 / GZ201007 / GZ201009 / GZ201008 / GZ201023</p> <p>On product: item# 56310: ZURU GZ201008</p> <p>item# 56389: ZURU GZ201008</p> <p>item# 5697: ZURU GZ201008</p> <p>item# 56386: ZURU GZ201008</p> <p>item# 56316: ZURU GZ201007</p> <p>other items: NA Test items are too small to be marked and no tracking label was found on the product</p>	P/#



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Tests Conducted

Evaluation	Citation / Method	Criteria	Results	Rating
Fair Packaging and Labeling Act	16 CFR 500	<ul style="list-style-type: none"> - Consumable commodities sold with the product, such as glues and adhesives, shall comply with the labeling requirements of 16 CFR 500. - Shall be labeled with product identification. - Shall be labeled with the manufacturer, packer, or distributor's name and address (city, state and zip). - Net quantity of contents shall be expressed in terms of weight or mass, measure, numerical count, or combination so as to give accurate information to facilitate consumer comparison. 	M	P/#

P = Pass M = Meet

= Test item of labelling assessment in this report was not included in the CNAS accreditation schedule for our laboratory



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Tests Conducted

1 Physical and Mechanical Tests

As per ASTM Standard Consumer Safety Specification for Toy Safety F963-17

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 :

Test	Test	Parameter
Tip over test		3 times
Impact test	Section 1500.53(b)	4 X 3 ft
Torque test	Section 1500.53(e)	4 in-lbf
Tension test	Section 1500.53(f)	15 lbf
Compression test	Section 1500.53(g)	30 lbf

Section	Testing Items	Assessment
4.1	Material quality (visual check on cleanliness)	P
4.3.7	Stuffing materials	NA
4.5	Sound-producing toys	NA
4.6.1	Toys intended for children under 36 months (small objects)	NA
4.6.2	Mouth-actuated toys	NA
4.6.3	Toys and games for 36 months to 72 months (small part warning)	P
4.7	Accessible edges	P
4.8	Projections	P
4.9	Accessible points	P
4.10	Wires or rods	NA
4.11	Nails and fasteners	P
4.12	Plastic film	P
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	Projectile toys	P
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



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Section	Testing Items	Assessment
4.31	Balloons	P
4.32	Certain toys with nearly spherical ends	NA
4.33	Marbles	NA
4.34	Balls	NA
4.35	Pompoms	NA
4.36	Hemispheric-shaped objects	NA
4.37	YoYo 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	Labelling requirement	P
6	Instructional literature	P
7	Producer's markings	
7.1	- Name of producer/distributor (Toy and Package)	Yes
	- Address (Package)	Yes
7.3	Toy chests	NA
7.3.1	Name and address of manufacturer/distributor/seller	NA
7.3.2	Code mark	NA

Remark : The submitted samples were undergone the tests in accordance with section 8.5 through section 8.18 and 8.20 through 8.26 on normal use, abuse and specific tests for different types of toys whichever is applicable.

P = Pass NA = Not Applicable

2 Flammability test

As per section 4.2 of the ASTM standard consumer safety specification on toy safety F963-17, the samples were tested according to Annex A5 Flammability testing procedure for solids and soft toys

Sample	Ignition Point	Burn Length (inch)	Time (sec)	Actual Burn Rate (inch/sec)	Rounded # Burn rate (inch/sec)	Limit (inch/sec)
Red bunch balloons	End	7.0	60.00	0.12	0.1	0.1

The submitted toy samples were tested, the above result only showed the most severe burn rate of the samples.



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Tests Conducted

3 Heavy Elements Analysis (except modelling clay)

As per Section 4.3.5 and Section 8.3.2 to 8.3.5 of the ASTM Standard Consumer Safety Specification on Toy Safety F963-17, heavy elements migration content were determined by Inductively Coupled Argon Plasma Spectrometry.

Element	Result (ppm)				Reporting limit (ppm)	Limit (ppm)
	Tested component					
	(1)	(2)	(3)	(4)		
Sol. Barium (Ba)	10*	8*	ND*	ND*	5	1000
Sol. Lead (Pb)	ND	ND	ND	ND	5	90
Sol. Cadmium (Cd)	ND	ND	ND	ND	5	75
Sol. Antimony (Sb)	ND	ND	ND	ND	5	60
Sol. Selenium (Se)	ND	ND	ND	ND	5	500
Sol. Chromium (Cr)	ND	ND	ND	ND	5	60
Sol. Mercury (Hg)	ND	ND	ND	ND	5	60
Sol. Arsenic (As)	ND	ND	ND	ND	2.5	25

Element	Result (ppm)				Reporting limit (ppm)	Limit (ppm)
	Tested component					
	(8)	(31)	(52)	(53)		
Sol. Barium (Ba)	12 [#]	8 [#]	ND	ND	5	1000
Sol. Lead (Pb)	ND	ND	--	--	5	90
Sol. Cadmium (Cd)	ND	ND	ND	ND	5	75
Sol. Antimony (Sb)	ND	ND	ND	ND	5	60
Sol. Selenium (Se)	ND	ND	ND	ND	5	500
Sol. Chromium (Cr)	ND	ND	ND	ND	5	60
Sol. Mercury (Hg)	ND	ND	ND	ND	5	60
Sol. Arsenic (As)	ND	ND	ND	ND	2.5	25

Element	Result (ppm)	Reporting limit (ppm)	Limit (ppm)
	Tested component		
	(5)to(7), (9)to(24), (32)to(40), (46)to(51)		
Sol. Barium (Ba)	ND	5	1000
Sol. Lead (Pb)	ND	5	90
Sol. Cadmium (Cd)	ND	5	75
Sol. Antimony (Sb)	ND	5	60
Sol. Selenium (Se)	ND	5	500
Sol. Chromium (Cr)	ND	5	60
Sol. Mercury (Hg)	ND	5	60
Sol. Arsenic (As)	ND	2.5	25



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Tests Conducted

Sol. = Soluble
ppm = part per million = mg/kg
ND = Not detected
= The results were adjusted by subtracting analytical correction factor.

Tested Component(s): See component list in the last section of this report

4 Total Lead (Pb) Content in Non-Surface Coating

With reference to Section 4.3.5 of the ASTM Standard Consumer Safety Specification on Toy Safety F963-17, test method CPSC-CH-E1001-08.3 or/and CPSC-CH-E1002-08.3 were used and total Lead content was determined by Inductively Coupled Argon Plasma Spectrometry.

Element	Result (ppm)	Reporting Limit (ppm)	Limit (ppm)
	Tested Component		
	(1+2+3), (4+5+6), (7+8+9), (10+11+12), (13+14+15), (16+17+18), (19+20+21), (22+23+24), (32+33), (34+35+36), (37+38+39), (40), (46+47), (48+49), (50+51)		
Lead (Pb)	ND	10	100

ppm = part per million = mg/kg
ND = Not detected

Tested Component(s): See component list in the last section of this report

5 Total Lead (Pb) Content in Surface Coating

With reference to Section 4.3.5 of the ASTM Standard Consumer Safety Specification on Toy Safety F963-17, test method CPSC-CH-E1003-09.1 was used and total Lead content was determined by Inductively Coupled Argon Plasma Spectrometry.

Element	Result (ppm)	Reporting Limit (ppm)	Limit (ppm)
	Tested Component		
	(31)		
Lead (Pb)	ND	10	90

ppm = part per million = mg/kg
ND = Not detected

Tested Component(s): See component list in the last section of this report



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Tests Conducted

6 Physical and Mechanical Tests

As per U.S. Code of Federal Regulations Title 16 part 1500.50, the hazards of sharp points, sharp edge and small parts are assessed both before and after applicable use and abuse tests.

	No. of sample tested per style	Sharp Point (1500.48)	Sharp Edge (1500.49)	Small Part (1501)
As received	1	P	P	NA
Impact test (1500.53(b))	1	P	P	NA
Flexure test (1500.53(d))	0	NA	NA	NA
Torque test (1500.53(e))	1	P	P	NA
Tension test (1500.53(f))	1	P	P	NA
Compression test (1500.53(g))	1	P	P	NA

Remark: P = Pass NA = Not Applicable

7 Flammability test

As per U.S. Code of Federal Regulations Title 16 Part 1500.44 for rigid and pliable solids

Sample	Ignition Point	Burn Length (inch)	Time (sec)	Actual Burn Rate (inch/sec)	Rounded # Burn rate (inch/sec)	Limit (inch/sec)
Red bunch balloons	End	7.0	60.00	0.12	0.1	0.1

The submitted toy samples were tested, the above result only showed the most severe burn rate of the samples.

8 Total Lead (Pb) Content in Surface Coating

As per Standard Operating Procedure for Determining Lead (Pb) in paint and other similar surface coatings, test method CPSC-CH-E1003-09.1 was used and total Lead content was determined by Inductively Coupled Argon Plasma Spectrometry.

Element	Result (ppm)	Reporting Limit (ppm)	Limit (ppm)
	Tested Component		
	(31)		
Lead (Pb)	ND	10	90



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Tests Conducted

The above limit was quoted according to U.S. CFR Title 16 Part 1303 and U.S. Consumer Product Safety Improvement Act 2008 Title I, Section 101 for total Lead content in surface coating.

ppm = parts per million = mg/kg
ND = Not detected (less than reporting limit)

Tested Component(s): See component list in the last section of this report

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

As per Standard Operating Procedures for Determining total Lead (Pb) in children's products, test methods CPSC-CH-E1002-08.3 and/or CPSC-CH-E1001-08.3 were used and total Lead content was determined by Inductively Coupled Argon Plasma Spectrometry.

Element	Result (ppm)	Reporting Limit (ppm)	Limit (ppm)
	Tested Component		
	(1+2+3), (4+5+6), (7+8+9), (10+11+12), (13+14+15), (16+17+18), (19+20+21), (22+23+24), (32+33), (34+35+36), (37+38+39), (40), (46+47), (48+49), (50+51)		
Lead (Pb)	ND	10	100

The above limit was quoted according to U.S. Consumer Product Safety Improvement Act 2008 Title I, Section 101 for total Lead content in Non-surface coating materials.

ppm = parts per million = mg/kg
ND = Not detected (less than reporting limit)

Tested Component(s): See component list in the last section of this report



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Tests Conducted

10 Phthalate Content

As per CPSC-CH-C1001-09.4, by Gas Chromatographic-Mass Spectrometric (GC-MS) analysis.

Test item	CAS No.	Result (%)	Reporting limit (%)	Limit (%)
		Tested component (1+2+3), (4+5+6), (7+8+9), (10+11+12), (13+14+15), (16+17+18), (19+20+21), (22+23+24), (31), (32+33), (34+35+36), (37+38+39), (40), (46+47), (48+49), (50+51)		
Dibutyl phthalate (DBP)	84-74-2	ND	0.01	0.1
Di-(2-ethyl hexyl) phthalate (DEHP)	117-81-7	ND	0.01	0.1
Benzyl butyl phthalate (BBP)	85-68-7	ND	0.01	0.1
Di-iso-nonyl phthalate (DINP)	28553-12-0	ND	0.01	0.1
Diisobutyl phthalate (DIBP)	84-69-5	ND	0.01	0.1
Di-n-pentyl Phthalate (DPENP)	131-18-0	ND	0.01	0.1
Di-n-hexyl Phthalate (DHEXP)	84-75-3	ND	0.01	0.1
Dicyclohexyl Phthalate (DCHP)	84-61-7	ND	0.01	0.1

The above limit was quoted according to US 16 CFR Part 1307 for Prohibition of Children's Toys and Child Care Articles Containing Specified Phthalates.

ND = Not detected(less than reporting limit)

Tested Component(s): See component list in the last section of this report



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Tests Conducted

11 Physical and Mechanical Tests

As per Canada Consumer Product Safety Act Toys Regulations SOR/2011-17:

The submitted samples were undergone the use and abuse tests in accordance with the Canada Consumer Product Safety Act Toys Regulations SOR/2011-17:

Test	Parameter
Drop test	4 X 0.914 m
Pull test	44.5 N
Push test	44.5 N

No.	Testing Items	Assessment
3	General - English and French bilingual statement	NA
	Packaging	
4	(a) The opening perimeter is less than 14 inches	P
	(b) The opening perimeter is more than 14 inches	NA
	Electrical hazard	
5	Electrically operated toys	NA
6	Electrically heated toys	NA
	Mechanical hazard	
7	Small parts	NA
8	Metal edges	P
9	Wire frames	NA
10	Plastic edges	P
11	Wooden surfaces, edges and corners	NA
12	Glass	NA
13	Fasteners	P
14	Folding mechanism, bracket or bracing	NA
15	Spring-wound driving mechanisms	NA
16	Projectile components	NA
17	Toys which a child can enter and which can be closed by a lid or door	NA
18	Stationary toy that is intended to bear the weight of a child	NA
	Auditory hazards	
19	Noise limit	NA
	Thermal hazards	
20	Heated surfaces, parts or substances	NA
	Dolls, plush toys and soft toys	
28	Fastenings to attach parts, clothing or ornamentation	NA
	Stuffing materials	
29	(a) Clean and free from vermin	NA
	(b) Free from hard and sharp foreign matter	NA
30	Small parts -Squeaker, reed, valve or other similar device	NA



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No.	Testing Items	Assessment
31	Eyes and noses	NA
	Plant seeds	
35	Plant seeds for making noise	NA
36	Plant seeds for stuffing material	NA
37	Pull and push toys that has a shaft-like handle	NA
38	Toy steam engines boilers	NA
40	Rattle	NA
41	Elastics	NA
	Yo-yo type balls	
42	(a) Stretchable cords	NA
	(b) Similar product	NA
43	Magnetic force	NA
44	(1) Exceptions of 44 (1)(a)	NA
	Exceptions of 44 (1)(b)	NA
	(2) Warning – Container and instructions or use for 44 (1)(b)	NA

P = Pass NA = Not Applicable

12 Cellulose Nitrate and Celluloid

Test Standard: As per Canada Consumer Product Safety Act Toys Regulations SOR/2011-17 Section 21

	Assessment	Requirement
Cellulose Nitrate/Celluloid	Absent	Absent

13 Toxic Elements Analysis

As per Method C-02.2.1 (effective 2018-03-12), C-03 (effective 2018-08-01) published in Health Canada Product Safety Reference Manual Book 5 - Laboratory Policies and Procedures Part B: Test Methods Section, acid digestion and extraction methods were used and toxic elements content were determined by Inductively Coupled Plasma-mass Spectrometry (ICP-MS).

Element	Result	Reporting limit	Limit
	Tested component		
	(31)		
Tot. Lead (Pb)	ND	10mg/kg	90 mg/kg
Sol. Cadmium (Cd)	ND	0.0005%	0.1%
Sol. Antimony (Sb)	ND	0.0010%	0.1%
Sol. Selenium (Se)	ND	0.0005%	0.1%
Sol. Arsenic (As)	ND	0.0004%	0.1%
Sol. Barium (Ba)	0.0010%	0.0010%	0.1%



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Acid digestion method was used and total Mercury content was determined by Inductively Coupled Plasma-mass Spectrometry (ICP-MS).

Element	Result	Reporting limit	Limit
	Tested component		
	(31)		
Tot. Mercury (Hg)	ND	0.028mg/kg	ND

The above limits were quoted according to Canada Consumer Product Safety Act Toys Regulations SOR/2011-17 Section 23 for prohibition on toxic elements in surface coatings.

Tot. = Total

Sol. = Soluble

ND = Not detected (less than reporting limit)

Remark: total Mercury content test is not included in the CNAS accreditation schedule for our laboratory.

Tested Component(s): See component list in the last section of this report

14 Total Lead (Pb) content

As per Method C-02.2.1(effective 2018-03-12), C-02.3(effective 2017-05-02) and C-02.4(effective 2017-07-27), published in Health Canada Product Safety Reference Manual Book 5 - Laboratory Policies and Procedures Part B: Test Methods Section, acid digestion was used and total Lead content was determined by Inductively Coupled Argon Plasma Spectrometry (ICP), Inductively Coupled Plasma Mass Spectrometry (ICP-MS) and Atomic Absorption Spectrometry (AAS).

Element	Result (mg/kg)	Reporting Limit (mg/kg)	Limit (mg/kg)
	Tested Component		
	(1+2+3), (4+5+6), (7+8+9), (10+11+12), (13+14+15), (16+17+18), (19+20+21), (22+23+24), (31), (32+33), (34+35+36), (37+38+39), (40), (46+47), (48+49), (50+51)		
Lead (Pb)	ND	10	90

The above limit was quoted according to Canada Consumer Products Containing Lead Regulations SOR/2018-83.

ND = Not detected

Tested Component(s): See component list in the last section of this report



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Number: GZHH0038087403

Tests Conducted

15 Phthalate Content

As per Method CPSC-CH-C1001-09.3 and followed by Gas Chromatographic-Mass Spectrometric (GC-MS) analysis.

For 6 phthalate

Test Item	CAS No.	Result (mg/kg)	Reporting Limit (mg/kg)	Limit (mg/kg)
		Tested Component (1+2+3), (4+5+6), (7+8+9), (10+11+12), (13+14+15), (16+17+18), (19+20+21), (22+23+24), (31), (32+33), (34+35+36), (37+38+39), (40), (46+47), (48+49), (50+51)		
Dibutyl phthalate (DBP)	84-74-2	ND	100	1000
Di-(2-ethyl hexyl) phthalate (DEHP)	117-81-7	ND	100	1000
Benzyl butyl phthalate (BBP)	85-68-7	ND	100	1000
Di-iso-nonyl phthalate (DINP)	28553-12-0	ND	100	1000
Di-n-octyl phthalate (DNOP)	117-84-0	ND	100	1000
Di-iso-decyl phthalate (DIDP)	26761-40-0	ND	100	1000

The above limit was quoted according to Canada Consumer Product Safety Act Phthalates Regulations SOR/2016-188 for phthalate content on toys and child care articles.

ND = Not detected (less than reporting limit)

Tested Component(s): See component list in the last section of this report



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Test Report

Number: GZHH0038087403

Tests Conducted

16 Physical and Mechanical Tests

As per European Standard on Safety of toys EN71-1:2014+A1:2018

Clause	Testing Items	Assessment
4	General requirements	
4.1	Material	P
4.2	Assembly	NA
4.3	Flexible plastic sheeting	P
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 in the mouth	NA
4.12	Balloons	P
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	Projectile toys	P
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	Flying toys	NA
5	Toys intended for children under 36 months	
5.1	General requirements	NA
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
5.10	Small balls	NA



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Tests Conducted

Clause	Testing Items	Assessment
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	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	P/#
7.3	Latex balloons	P
7.4	Aquatic toys	NA
7.5	Functional toys	NA
7.6	Hazardous sharp functional edges and points	NA
7.7	Projectile toys	NA
7.8	Imitation protective masks and helmets	NA
7.9	Toy kites	NA
7.10	Roller skates, inlineskates and skateboards and certain other ride-on toys	NA
7.11	Toys intended to be attached to strung across a cradle, cot, or perambulator	NA
7.12	Liquid-filled teethingers	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	P

Remark: P = Pass NA = Not Applicable

= Age warning statement and indication of hazard was found on the packaging.



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Tests Conducted

Remark: Additional information according to the Toy Safety Directives 2009/48/EC requirement. These information also appears as a note within the EN71 but are not standard requirements:

1. Marking

The manufacturer's and importer's name, registered trade name or registered trade mark, the address and the CE-marking shall be indicated on the toy or, where that is not possible, on its packaging or in a document accompany the toy. In addition, 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.

- Manufacturer's name was on the packaging and toy.
- Manufacturer's address was on the packaging.
- Importer's name was on the packaging and toy.
- Importer's address was on the packaging.
- Product identification code was on the packaging.
- CE marking was on the packaging.

17 Flammability Test

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

Clause	Testing Items	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

Remark: P = Pass NA = Not Applicable



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Tests Conducted

18 19 Toxic Element Migration Test

(A) Test Result

As per EN 71-3:2019 and followed by Inductively Coupled Plasma Atomic Emission Spectrometry, Ion Chromatography with UV-VIS.

Category (III): Scraped-off toy material

Element	Result (mg/kg)				Reporting Limit (mg/kg)	Limit (mg/kg)
	Tested Component					
	(1)	(2)	(3)	(4)		
Aluminium (Al)	ND	ND	ND	ND	300	70000 / 28130▲
Antimony (Sb)	ND	ND	ND	ND	10	560
Arsenic (As)	ND	ND	ND	ND	10	47
Barium (Ba)	15	11	ND	ND	10	18750
Boron (B)	ND	ND	ND	ND	50	15000
Cadmium (Cd)	ND	ND	ND	ND	5	17
Chromium (III) (Cr III) #	ND	ND	ND	ND	10	460
Chromium (VI) (Cr VI)	ND	ND	ND	ND	0.025	0.053
Cobalt (Co)	ND	ND	ND	ND	10	130
Copper (Cu)	ND	ND	ND	ND	10	7700
Lead (Pb)	ND	ND	ND	ND	10	23
Manganese (Mn)	ND	ND	ND	ND	10	15000
Mercury (Hg)	ND	ND	ND	ND	10	94
Nickel (Ni)	ND	ND	ND	ND	10	930
Selenium (Se)	ND	ND	ND	ND	10	460
Strontium (Sr)	ND	ND	ND	ND	100	56000
Tin (Sn)	ND	ND	ND	ND	2.5	180000
Organic tin **	ND	ND	ND	ND	5	12
Zinc (Zn)	1163	705	607	520	100	46000



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Tests Conducted

Element	Result (mg/kg)				Reporting Limit (mg/kg)	Limit (mg/kg)
	Tested Component					
	(5)	(6)	(7)	(8)		
Aluminium (Al)	ND	ND	ND	ND	300	70000 / 28130▲
Antimony (Sb)	ND	ND	ND	ND	10	560
Arsenic (As)	ND	ND	ND	ND	10	47
Barium (Ba)	ND	ND	ND	17	10	18750
Boron (B)	ND	ND	ND	ND	50	15000
Cadmium (Cd)	ND	ND	ND	ND	5	17
Chromium (III) (Cr III) #	ND	ND	ND	ND	10	460
Chromium (VI) (Cr VI)	ND	ND	ND	ND	0.025	0.053
Cobalt (Co)	ND	ND	ND	ND	10	130
Copper (Cu)	ND	ND	ND	ND	10	7700
Lead (Pb)	ND	ND	ND	ND	10	23
Manganese (Mn)	ND	ND	ND	ND	10	15000
Mercury (Hg)	ND	ND	ND	ND	10	94
Nickel (Ni)	ND	ND	ND	ND	10	930
Selenium (Se)	ND	ND	ND	ND	10	460
Strontium (Sr)	ND	ND	ND	ND	100	56000
Tin (Sn)	ND	ND	ND	ND	2.5	180000
Organic tin **	ND	ND	ND	ND	5	12
Zinc (Zn)	695	758	662	608	100	46000

Element	Result (mg/kg)				Reporting Limit (mg/kg)	Limit (mg/kg)
	Tested Component					
	(9)	(22)	(31)	(51)		
Aluminium (Al)	ND	ND	ND	ND	300	70000 / 28130▲
Antimony (Sb)	ND	ND	ND	ND	10	560
Arsenic (As)	ND	ND	ND	ND	10	47
Barium (Ba)	ND	ND	11	ND	10	18750
Boron (B)	ND	ND	ND	ND	50	15000
Cadmium (Cd)	ND	ND	ND	ND	5	17
Chromium (III) (Cr III) #	ND	ND	ND	ND	10	460
Chromium (VI) (Cr VI)	ND	ND	ND	ND	0.025	0.053
Cobalt (Co)	ND	ND	ND	ND	10	130
Copper (Cu)	ND	ND	ND	ND	10	7700
Lead (Pb)	ND	ND	ND	ND	10	23
Manganese (Mn)	ND	ND	ND	ND	10	15000
Mercury (Hg)	ND	ND	ND	ND	10	94
Nickel (Ni)	ND	ND	ND	ND	10	930
Selenium (Se)	ND	ND	ND	ND	10	460
Strontium (Sr)	ND	ND	ND	ND	100	56000
Tin (Sn)	ND	ND	ND	ND	2.5	180000
Organic tin **	ND	ND	ND	ND	5	12
Zinc (Zn)	585	589	288	269	100	46000



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Tests Conducted

Element	Result (mg/kg)	Reporting Limit (mg/kg)	Limit (mg/kg)
	Tested Component		
	(10)to(21), (23), (24), (32)to(40), (46)to(50), (52), (53)		
Aluminium (Al)	ND	300	70000 / 28130 [▲]
Antimony (Sb)	ND	10	560
Arsenic (As)	ND	10	47
Barium (Ba)	ND	10	18750
Boron (B)	ND	50	15000
Cadmium (Cd)	ND	5	17
Chromium (III) (Cr III) [#]	ND	10	460
Chromium (VI) (Cr VI)	ND	0.025	0.053
Cobalt (Co)	ND	10	130
Copper (Cu)	ND	10	7700
Lead (Pb)	ND	10	23
Manganese (Mn)	ND	10	15000
Mercury (Hg)	ND	10	94
Nickel (Ni)	ND	10	930
Selenium (Se)	ND	10	460
Strontium (Sr)	ND	100	56000
Tin (Sn)	ND	2.5	180000
Organic tin ^{**}	ND	5	12
Zinc (Zn)	ND	100	46000

Remark : mg/kg = milligram per kilogram

++ = Unless the test results were marked with "Δ", Organic tin contents were not directly determined and were derived from migration results of total tin.

- Organic tin test result was expressed as tributyl tin.

ND = Not detected (less than reporting limit)

▲ = The new Aluminium migration limit were quoted from Directive (EU) 2019/1922 amending Directive 2009/48/EC applicable from 20 May 2021.

= The reported value of migration of Chromium (III) = migration value of total Chromium – migration value of Chromium(VI).

Tested Component(s): See component list in the last section of this report



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Tests Conducted

(B) Categories of various toy materials

Category I: Dry, brittle, powder like or pliable

Solid toy material from which powder-like material is released during playing and semi-solid materials that may also leave residues on the hands during play. The material can be ingested. Contamination of the hands with the material may contribute to the oral exposure of the material. (e.g. the cores of colouring pencils, chalk, crayons, modelling clays and plaster).

Category II: Liquid or sticky

Fluid or viscous toy material, which can be ingested or to which dermal exposure may occur during playing. (e.g. liquid paints, finger paints, liquid ink in pens, glue sticks, slimes, bubble solution).

Category III: Scraped-off

Solid toy material with or without a coating, which can be ingested as a result of biting, tooth scraping, sucking or licking. (e.g. coatings, lacquers, plastics, paper, textiles, glass, ceramic, metallic, wooden, bone, leather and other materials).

19 Cadmium (Cd) Content

With reference to test method IEC 62321-5:2013, acid digestion method was used and total Cadmium content was determined by Inductively Coupled Argon Plasma Spectrometry.

Element	Result (%)	Reporting Limit (%)
	Tested Component	
	(1+2+3), (4+5+6), (7+8+9), (10+11+12), (13+14+15), (16+17+18), (19+20+21), (22+23+24), (31), (32+33), (34+35+36), (37+38+39), (40), (46+47), (48+49), (50+51)	
Cadmium (Cd)	ND	0.0005

Limit:

Category	Limit (%)
Wet paint	0.01
Surface coating	0.1
Plastic	0.01
Metal parts of jewellery and hair accessories	0.01

The limit was quoted according to Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) and Amendment (EC) No 552/2009, (EU) No 494/2011, (EU) No 835/2012 and (EU) 2016/217, Annex XVII Entry 23 on Cadmium Content.

ND = Not detected (less than reporting limit)

Tested Component(s): See component list in the last section of this report



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Number: GZHH0038087403

Tests Conducted

20 Phthalate Content Test

With reference to ISO 8124-6:2018, by Gas Chromatographic-Mass Spectrometric (GC-MS) analysis.

(A) EEC Regulated Phthalates

For 7 phthalate

Test Item	CAS No.	Result (%)	Reporting Limit (%)	Limit (%)
		Tested component (1+2+3), (4+5+6), (7+8+9), (10+11+12), (13+14+15), (16+17+18), (19+20+21), (22+23+24), (31), (32+33), (34+35+36), (37+38+39), (40), (46+47), (48+49), (50+51)		
Dibutyl phthalate (DBP)	84-74-2	ND	0.005	--
Di-(2-ethyl hexyl) phthalate (DEHP)	117-81-7	ND	0.005	--
Benzyl butyl phthalate (BBP)	85-68-7	ND	0.005	---
Diisobutyl phthalate (DIBP)	84-69-5	ND	0.005	
Sum of DBP, DEHP, BBP and DIBP	--	ND	--	0.1
Di-iso-nonyl phthalate (DINP)	28553-12-0/ 68515-48-0	ND	0.005	--
Di-n-octyl phthalate(DNOP)	117-84-0	ND	0.005	--
Di-iso-decyl phthalate (DIDP)	26761-40-0/ 68515-49-1	ND	0.005	--
Sum of DINP, DNOP and DIDP	--	ND	--	0.1

The above limit was quoted according to Annex XVII Items 51 & 52 of the REACH Regulation (EC) No. 1907/2006 & Amendment No. 552/2009 & Amendment Commission Regulation (EU) 2018/2005 for phthalate content in articles (formerly known as Directive 2005/84/EC).



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Tests Conducted

(B) Other Phthalate

<u>Test item</u>	<u>CAS No.</u>	<u>Result (%)</u>	<u>Reporting limit (%)</u>	<u>Limit (%)</u>
		<u>Tested component</u> (1+2+3), (4+5+6), (7+8+9), (10+11+12), (13+14+15), (16+17+18), (19+20+21), (22+23+24), (31), (32+33), (34+35+36), (37+38+39), (40), (46+47), (48+49), (50+51)		
Di-n-pentyl Phthalate (DPENP)	131-18-0	ND	0.01	0.1
Di-n-hexyl Phthalate (DHEXP) / (DnHP)	84-75-3	ND	0.01	0.1
Dicyclohexyl Phthalate (DCHP)	84-61-7	ND	0.01	0.1
Diisohexyl phthalate (DIHEXP)	71850-09-4	ND	0.01	0.1

For toys and childcare articles, combination of DIBP to current limit (sum of DBP, DEHP and BBP) was quoted from Commission Regulation (EU) 2018/2005 effective from 7 July 2020.

ND = Not detected (less than reporting limit)

Tested Component(s): See component list in the last section of this report



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Test Report

Number: GZHH0038087403

Tests Conducted

21 Phthalates Content

Solvent extraction, by Gas Chromatographic-Mass Spectrometric (GC-MS) analysis.

Test item	CAS No	Result (%)	Reporting limit (%)	Limit (%)
		Tested component (31)		
Diethyl hexyl phthalate (DEHP)	117-81-7	ND	0.01	0.1
Benzyl butyl phthalate (BBP)	85-68-7	ND	0.01	0.1
Dibutyl phthalate (DBP)	84-74-2	ND	0.01	0.1
Di-n-octyl phthalate (DNOP)	117-84-0	ND	0.01	0.1
Di-iso-nonyl phthalate (DINP)	28553-12-0/ 68515-48-0	ND	0.01	0.1
Di-iso-decyl phthalate (DIDP)	26761-40-0 68515-49-1	ND	0.01	0.1
Di-(iso-butyl) phthalate (DIBP)	84-69-5	ND	0.01	0.1
1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP)	71888-89-6	ND	0.01	0.1
1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)	68515-42-4	ND	0.01	0.1
Bis(2-methoxyethyl)phthalate (DMEP)	117-82-8	ND	0.01	0.1
1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	ND	0.01	0.1
Di-isopentyl phthalate (DIPP)	605-50-5	ND	0.01	0.1
n-pentyl iso-pentyl phthalate (nPIPP)	776297-69-9	ND	0.01	0.1
Dipentyl phthalate (DPP)	131-18-0	ND	0.01	0.1
Dihexyl phthalate (DnHP/DHEXP)	84-75-3	ND	0.01	0.1
1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4	ND	0.01	0.1
1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters; 1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with ≥0.3% of dihexyl phthalate	68515-51-5 68648-93-1	ND	0.01	0.1
Dicyclohexyl phthalate (DCHP)	84-61-7	ND	0.01	0.1
Di-(2-ethylhexyl) adipate (DEHA)	103-23-1	ND	0.01	--
Di-octyl terephthalate (DOTP) / Di-(2-ethylhexyl)terephthalate(DEHT)	6422-86-2	2.60	0.01	--
Di-(2-propylheptyl)-phthalate (DPHP)	53306-54-0	ND	0.01	0.1



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Tests Conducted

Test item	CAS No	Result (%)	Reporting limit (%)	Limit (%)
		Tested component (32+33)		
Diethyl hexyl phthalate (DEHP)	117-81-7	ND	0.01	0.1
Benzyl butyl phthalate (BBP)	85-68-7	ND	0.01	0.1
Dibutyl phthalate (DBP)	84-74-2	ND	0.01	0.1
Di-n-octyl phthalate (DNOP)	117-84-0	ND	0.01	0.1
Di-iso-nonyl phthalate (DINP)	28553-12-0/ 68515-48-0	ND	0.01	0.1
Di-iso-decyl phthalate (DIDP)	26761-40-0 68515-49-1	ND	0.01	0.1
Di-(iso-butyl) phthalate (DIBP)	84-69-5	ND	0.01	0.1
1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP)	71888-89-6	ND	0.01	0.1
1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)	68515-42-4	ND	0.01	0.1
Bis(2-methoxyethyl)phthalate (DMEP)	117-82-8	ND	0.01	0.1
1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	ND	0.01	0.1
Di-isopentyl phthalate (DIPP)	605-50-5	ND	0.01	0.1
n-pentyl iso-pentyl phthalate (nPIPP)	776297-69-9	ND	0.01	0.1
Dipentyl phthalate (DPP)	131-18-0	ND	0.01	0.1
Dihexyl phthalate (DnHP/DHEXP)	84-75-3	ND	0.01	0.1
1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4	ND	0.01	0.1
1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters; 1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with ≥0.3% of dihexyl phthalate	68515-51-5 68648-93-1	ND	0.01	0.1
Dicyclohexyl phthalate (DCHP)	84-61-7	ND	0.01	0.1
Di-(2-ethylhexyl) adipate (DEHA)	103-23-1	ND	0.01	--
Di-octyl terephthalate (DOTP) / Di-(2-ethylhexyl)terephthalate(DEHT)	6422-86-2	3.68	0.01	--
Di-(2-propylheptyl)-phthalate (DPHP)	53306-54-0	ND	0.01	0.1



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Tests Conducted

Test item	CAS No	Result (%)	Reporting limit (%)	Limit (%)
		Tested component (34+35+36)		
Diethyl hexyl phthalate (DEHP)	117-81-7	ND	0.01	0.1
Benzyl butyl phthalate (BBP)	85-68-7	ND	0.01	0.1
Dibutyl phthalate (DBP)	84-74-2	ND	0.01	0.1
Di-n-octyl phthalate (DNOP)	117-84-0	ND	0.01	0.1
Di-iso-nonyl phthalate (DINP)	28553-12-0/ 68515-48-0	ND	0.01	0.1
Di-iso-decyl phthalate (DIDP)	26761-40-0 68515-49-1	ND	0.01	0.1
Di-(iso-butyl) phthalate (DIBP)	84-69-5	ND	0.01	0.1
1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP)	71888-89-6	ND	0.01	0.1
1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)	68515-42-4	ND	0.01	0.1
Bis(2-methoxyethyl)phthalate (DMEP)	117-82-8	ND	0.01	0.1
1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	ND	0.01	0.1
Di-isopentyl phthalate (DIPP)	605-50-5	ND	0.01	0.1
n-pentyl iso-pentyl phthalate (nPIPP)	776297-69-9	ND	0.01	0.1
Dipentyl phthalate (DPP)	131-18-0	ND	0.01	0.1
Dihexyl phthalate (DnHP/DHEXP)	84-75-3	ND	0.01	0.1
1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4	ND	0.01	0.1
1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters; 1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with ≥0.3% of dihexyl phthalate	68515-51-5 68648-93-1	ND	0.01	0.1
Dicyclohexyl phthalate (DCHP)	84-61-7	ND	0.01	0.1
Di-(2-ethylhexyl) adipate (DEHA)	103-23-1	ND	0.01	--
Di-octyl terephthalate (DOTP) / Di-(2-ethylhexyl)terephthalate(DEHT)	6422-86-2	3.09	0.01	--
Di-(2-propylheptyl)-phthalate (DPHP)	53306-54-0	ND	0.01	0.1



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Number: GZHH0038087403

Tests Conducted

Test item	CAS No	Result (%)	Reporting limit (%)	Limit (%)
		Tested component (1+2+3), (4+5+6), (7+8+9), (10+11+12), (13+14+15), (16+17+18), (19+20+21), (22+23+24), (37+38+39), (40), (46+47), (48+49), (50+51)		
Diethyl hexyl phthalate (DEHP)	117-81-7	ND	0.01	0.1
Benzyl butyl phthalate (BBP)	85-68-7	ND	0.01	0.1
Dibutyl phthalate (DBP)	84-74-2	ND	0.01	0.1
Di-n-octyl phthalate (DNOP)	117-84-0	ND	0.01	0.1
Di-iso-nonyl phthalate (DINP)	28553-12-0/ 68515-48-0	ND	0.01	0.1
Di-iso-decyl phthalate (DIDP)	26761-40-0 68515-49-1	ND	0.01	0.1
Di-(iso-butyl) phthalate (DIBP)	84-69-5	ND	0.01	0.1
1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP)	71888-89-6	ND	0.01	0.1
1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)	68515-42-4	ND	0.01	0.1
Bis(2-methoxyethyl)phthalate (DMEP)	117-82-8	ND	0.01	0.1
1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	ND	0.01	0.1
Di-isopentyl phthalate (DIPP)	605-50-5	ND	0.01	0.1
n-pentyl iso-pentyl phthalate (nPIPP)	776297-69-9	ND	0.01	0.1
Dipentyl phthalate (DPP)	131-18-0	ND	0.01	0.1
Dihexyl phthalate (DnHP/DHEXP)	84-75-3	ND	0.01	0.1
1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4	ND	0.01	0.1
1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters; 1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with ≥0.3% of dihexyl phthalate	68515-51-5 68648-93-1	ND	0.01	0.1
Dicyclohexyl phthalate (DCHP)	84-61-7	ND	0.01	0.1
Di-(2-ethylhexyl) adipate (DEHA)	103-23-1	ND	0.01	--
Di-octyl terephthalate (DOTP) / Di-(2-ethylhexyl)terephthalate(DEHT)	6422-86-2	ND	0.01	--
Di-(2-propylheptyl)-phthalate (DPHP)	53306-54-0	ND	0.01	0.1



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Number: GZHH0038087403

Tests Conducted

ND = Not detected

Tested Component(s): See component list in the last section of this report

22 Phthalate Content

As per client's request, with reference to ISO 8124-6:2018, by Gas Chromatographic-Mass Spectrometric (GC-MS) analysis.

(For 23P)

Test item	CAS No.	Result (%)	Reporting limit (%)	Limit (%)
		Tested component (1+2+3), (4+5+6), (7+8+9), (10+11+12), (13+14+15), (16+17+18), (19+20+21), (22+23+24), (31), (32+33), (34+35+36), (37+38+39), (40), (46+47), (48+49), (50+51)		
Dibutyl phthalate (DBP)	84-74-2	ND	0.01	--
Benzyl butyl phthalate (BBP)	85-68-7	ND	0.01	--
Di-(2-ethyl hexyl) phthalate (DEHP)	117-81-7	ND	0.01	--
Di-(iso-butyl) phthalate (DIBP)	84-69-5	ND	0.01	--
Bis(2-methoxyethyl)phthalate (BMEP/DMEP)	117-82-8	ND	0.01	--
Di-n-hexyl phthalate (DnHP)	84-75-3	ND	0.01	--
Di-isopentylphthalate (DIPP)	605-50-5	ND	0.01	--
Dipentyl phthalate (DPP)	131-18-0	ND	0.01	--
n-pentyl iso-pentylphthalate (PIPP)	776297-69-9	ND	0.01	--
1,2-Benzenedicarboxylic acid, di-C ₆₋₈ -branched alkyl esters, C ₇ -rich (DIHP)	71888-89-6	ND	0.01	--
1,2-Benzenedicarboxylic acid, di-C ₇₋₁₁ -branched and linear alkyl esters (DHNUP)	68515-42-4	ND	0.01	--
1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4	ND	0.01	--
1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	ND	0.01	--



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Number: GZHH0038087403

Tests Conducted

Test item	CAS No.	Result (%)	Reporting limit (%)	Limit (%)
		Tested component (1+2+3), (4+5+6), (7+8+9), (10+11+12), (13+14+15), (16+17+18), (19+20+21), (22+23+24), (31), (32+33), (34+35+36), (37+38+39), (40), (46+47), (48+49), (50+51)		
1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters; 1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with ≥ 0.3% of dihexyl phthalate (EC No. 201-559-5)	68648-93-1	ND	0.01	--
1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters; 1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with ≥ 0.3% of dihexyl phthalate (EC No. 201-559-5)	68515-51-5	ND	0.01	--
Di-iso-decyl phthalate (DIDP)	26761-40-0	ND	0.01	--
Di-iso-decyl phthalate (DIDP)	68515-49-1	ND	0.01	--
Di-iso-nonyl phthalate (DINP)	28553-12-0	ND	0.01	--
Di-iso-nonyl phthalate (DINP)	68515-48-0	ND	0.01	--
di-n-octyl phthalate (DNOP)	117-84-0	ND	0.01	--
Dicyclohexyl phthalate (DCHP)	84-61-7	ND	0.01	--
Diisohexyl phthalate	71850-09-4	ND	0.01	--
Bis-(2-propylheptyl)-phthalate (DPHP)	53306-54-0	ND	0.01	--
Sum of 23 Phthalates	--	ND	--	0.1

ND = Not detected(Less than reporting limit)

Tested Component(s): See component list in the last section of this report



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Number: GZHH0038087403

Tests Conducted

23 Phthalates Content

With reference to ISO 8124-6:2018, by Gas Chromatographic-Mass Spectrometric (GC-MS) analysis.

[For Toy]

Test item	CAS No	Result (%)	Reporting limit (%)	Limit (%)
		Tested component (1+2+3), (4+5+6), (7+8+9), (10+11+12), (13+14+15), (16+17+18), (19+20+21), (22+23+24), (31), (32+33), (34+35+36), (37+38+39), (40), (46+47), (48+49), (50+51)		
Diethyl hexyl phthalate (DEHP)	117-81-7	ND	0.01	--
Benzyl butyl phthalate (BBP)	85-68-7	ND	0.01	--
Dibutyl phthalate (DBP)	84-74-2	ND	0.01	--
Di-(iso-butyl) phthalate (DIBP)	84-69-5	ND	0.01	--
Sum of DBP, DEHP, BBP and DIBP	--	ND	--	0.1
Di-n-octyl phthalate (DNOP)	117-84-0	ND	0.01	--
Di-iso-nonyl phthalate (DINP)	28553-12-0	ND	0.01	--
Di-iso-decyl phthalate (DIDP)	26761-40-0	ND	0.01	--
Sum of DINP, DNOP and DIDP	--	ND	--	0.1
1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP)	71888-89-6	ND	0.01	0.1
1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)	68515-42-4	ND	0.01	0.1
Bis(2-methoxyethyl)phthalate (DMEP)	117-82-8	ND	0.01	0.1
1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	ND	0.01	0.1
Di-isopentyl phthalate (DIPP)	605-50-5	ND	0.01	0.1
n-pentyl iso-pentyl phthalate (nPIPP)	776297-69-9	ND	0.01	0.1
Dipentyl phthalate (DPP)	131-18-0	ND	0.01	0.1
Dihexyl phthalate (DnHP/DHEXP)	84-75-3	ND	0.01	0.1
1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4	ND	0.01	0.1



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Tests Conducted

Test item	CAS No	Result (%)	Reporting limit (%)	Limit (%)
		Tested component (1+2+3), (4+5+6), (7+8+9), (10+11+12), (13+14+15), (16+17+18), (19+20+21), (22+23+24), (31), (32+33), (34+35+36), (37+38+39), (40), (46+47), (48+49), (50+51)		
1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters; 1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with ≥0.3% of dihexyl phthalate	68515-51-5 68648-93-1	ND	0.01	0.1
Dicyclohexyl phthalate (DCHP)	84-61-7	ND	0.01	0.1
Diisohexyl phthalate	71850-09-4	ND	0.01	0.1

ND = Not detected

Tested Component(s): See component list in the last section of this report

24 **Physical and Mechanical Tests**

As per the Australian / New Zealand Standard AS/NZS ISO 8124.1:2019 safety aspects related to mechanical and physical properties.

The submitted samples were undergone the normal use and the following reasonable foreseeable abuse tests in accordance with the Clause 5.24 of AS/NZS ISO 8124.1:2019 before the assessment of the relevant requirement in Clause 4:

Test	Test	Parameter
5.24.2	Drop test	4 x 93 ± 5cm
5.24.3	Tip-over test	3 times
5.24.5	Torque test	0.45 ± 0.02Nm
5.24.6	Tension test	70 ± 2N
5.24.7	Compression test	136 ± 2N

Section	Testing Items	Assessment
4.1	Normal use	P
4.2	Reasonably foreseeable abuse	P
4.3	Material	P



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Tests Conducted

Section	Testing Items	Assessment
4.4	Small parts	P
4.5	Shape, size and strength of certain toys	P
4.6	Edges	P
4.7	Points	P
4.8	Projections	NA
4.9	Metal wires and rods	NA
4.10	Plastic film or plastic bags in packaging and in toys	P
4.11	Cords	NA
4.12	Folding mechanisms	NA
4.13	Holes, clearances and accessibility of mechanisms	NA
4.14	Springs	NA
4.15	Stability and overload requirements	NA
4.16	Enclosures	NA
4.17	Simulated protective equipment, such as helmets, hats and goggles	NA
4.18	Projectile toys	P
4.19	Rotors and propellers	NA
4.20	Aquatic toys	NA
4.21	Braking	NA
4.22	Toy bicycles	NA
4.23	Speed limitation of electrically driven ride-on toys	NA
4.24	Toys containing a heat source	NA
4.25	Liquid-filled toys	NA
4.26	Mouth-actuated toys	NA
4.27	Toy roller skates, toy inline skates and toys skateboards	NA
4.28	Percussion caps specifically designed for use in toys	NA
4.29	Acoustic requirements	NA
4.30	Toy scooters	NA
4.31	Magnet and magnetic components	NA
4.32	Yo-yo balls	NA
4.33	Straps intended to be worn fully or partially around the neck	NA
4.34	Sledges and toboggans with cords for pulling	NA
4.35	Jaw entrapment in handles and steering wheels	NA
Annex B	Safety labelling guidelines and manufacturer's markings	P
Annex D	Toy gun marking	NA

Remark : P = Pass NA = Not Applicable



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Number: GZHH0038087403

Tests Conducted

25 Consumer Goods (Projectile Toys) Safety Standard 2020

As per Consumer Goods (Projectile Toys) Safety Standard 2020 using section 8, 9, 10, 11, 12, and section 13

Section 8 – Main Requirements

A projectile toy complies with the requirements in this Part if the projectile toy:

(a) complies with one of the following:

(i) the requirements in section 9 (Australian /New Zealand Standard for safety of toys);

AS/NZS ISO 8124.1: 2019

Clause	Testing Items	Assessment
4.18	Projectile toys	P
4.19	Rotors and propellers	NA

(ii) the requirements in section 10 (European Standard);

EN 71-1: 2014+A1: 2018

Clause	Testing Items	Assessment
4.11(e)	Mouth-actuated toys and other toys intended to be put in the mouth	NA
4.17	Projectiles toys	P

(iii) the requirements in section 11 (International Standard for safety of toys);

ISO 8124-1: 2018

Clause	Testing Items	Assessment
4.18	Projectile toys	P
4.19	Rotors and propellers	NA

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Section	Testing Items	Assessment
4.21	Projectile toys	P



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Tests Conducted

(b) complies with the requirements in section 13 (warning requirements).

Warning Requirement

Section	Testing Items	Assessment
Warning Requirement	Shall have the following warning statement or warning having the same meaning on packaging and instruction: "WARNING: Do not aim at eyes or face"	P

Remark : P = Pass NA = Not Applicable

26 Flammability test

As per Australian / New Zealand standard on safety of toys AS/NZS 8124.2:2016

Section	Testing Items	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

Remark : P = Pass NA = Not Applicable

27 Toxic Elements Analysis (General)

As per AS/NZS 8124.3:2012/Amdt 1:2016, acid extraction method was used and toxic elements content were determined by Inductively Coupled Argon Plasma Spectrometry.

Element	Result (mg/kg)				Reporting Limit (mg/kg)	Limit (mg/kg)
	Tested Component					
	(1)	(2)	(3)	(4)		
Sol. Barium (Ba)	10 [#]	8 [#]	ND [#]	ND [#]	5	1000
Sol. Lead (Pb)	ND	ND	ND	ND	5	90
Sol. Cadmium (Cd)	ND	ND	ND	ND	5	75
Sol. Antimony (Sb)	ND	ND	ND	ND	5	60
Sol. Selenium (Se)	ND	ND	ND	ND	5	500
Sol. Chromium (Cr)	ND	ND	ND	ND	5	60
Sol. Mercury (Hg)	ND	ND	ND	ND	5	60
Sol. Arsenic (As)	ND	ND	ND	ND	2.5	25



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Number: GZHH0038087403

Tests Conducted

Element	Result (mg/kg)		Reporting Limit (mg/kg)	Limit (mg/kg)
	Tested Component			
	(8)	(31)		
Sol. Barium (Ba)	12*	8*	5	1000
Sol. Lead (Pb)	ND	ND	5	90
Sol. Cadmium (Cd)	ND	ND	5	75
Sol. Antimony (Sb)	ND	ND	5	60
Sol. Selenium (Se)	ND	ND	5	500
Sol. Chromium (Cr)	ND	ND	5	60
Sol. Mercury (Hg)	ND	ND	5	60
Sol. Arsenic (As)	ND	ND	2.5	25

Element	Result (mg/kg)	Reporting Limit (mg/kg)	Limit (mg/kg)
	Tested Component		
	(5)to(7), (9)to(24), (32)to(40), (46)to(53)		
Sol. Barium (Ba)	ND	5	1000
Sol. Lead (Pb)	ND	5	90
Sol. Cadmium (Cd)	ND	5	75
Sol. Antimony (Sb)	ND	5	60
Sol. Selenium (Se)	ND	5	500
Sol. Chromium (Cr)	ND	5	60
Sol. Mercury (Hg)	ND	5	60
Sol. Arsenic (As)	ND	2.5	25

Sol. = Soluble

ND = Not detected (less than reporting limit)

= The analytical results were adjusted by subtracting analytical correction factor.

Tested Component(s): See component list in the last section of this report



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Number: GZHH0038087403

Tests Conducted

28 Physical and Mechanical Tests

As per International Standard ISO 8124-1:2018 - safety aspects related to mechanical and physical properties.

The submitted samples were undergone the normal use and the following reasonable foreseeable abuse tests in accordance with the Clause 5.24 of ISO 8124-1:2018 before the assessment of the relevant requirement in Clause 4 :

Test	Test	Parameter
5.24.2	Drop test	4 x 93 ± 5cm
5.24.3	Tip-over test	3 times
5.24.5	Torque test	0.45 ± 0.02Nm
5.24.6	Tension test	70 ± 2N
5.24.7	Compression test	136 ± 2N

Section	Testing Items	Assessment
4.1	Normal use	P
4.2	Reasonably foreseeable abuse	P
4.3	Material	P
4.4	Small parts	P
4.5	Shape, size and strength of certain toys	P
4.6	Edges	P
4.7	Points	P
4.8	Projections	NA
4.9	Metal wires and rods	NA
4.10	Plastic film or plastic bags in packaging and in toys	P
4.11	Cords and elastic	NA
4.12	Folding mechanisms	NA
4.13	Holes, clearances and accessibility of mechanisms	NA
4.14	Springs	NA
4.15	Stability and overload requirements	NA
4.16	Enclosures	NA
4.17	Simulated protective equipment, such as helmets, hats and goggles	NA
4.18	Projectile toys	P
4.19	Rotors and propellers	NA
4.20	Aquatic toys	NA
4.21	Braking	NA
4.22	Toy bicycles	NA
4.23	Speed limitation of electrically driven ride-on toys	NA
4.24	Toys containing a heat source	NA
4.25	Liquid-filled toys	NA
4.26	Mouth-actuated toys	NA



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Tests Conducted

Section	Testing Items	Assessment
4.27	Toy roller skates, toy inline skates and toys skateboards	NA
4.28	Percussion caps specifically designed for use in toys	NA
4.29	Acoustic requirements	NA
4.30	Toy scooters	NA
4.31	Magnet and magnetic components	NA
4.32	Yo-yo balls	NA
4.33	Straps intended to be worn fully or partially around the neck	NA
4.34	Sledges and toboggans with cords for pulling	NA
4.35	Jaw entrapment in handles and steering wheels	NA
Annex B	Safety labelling guidelines and manufacturer's markings	P
Annex D	Toy gun marking	NA

Remark : P = Pass NA = Not Applicable

Safety labelling and manufacturing marking should be in the language of the country in which the toys will be distributed.

29 Flammability test

As per International Standard on safety of toys ISO 8124-2:2014

Section	Testing Items	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 (animals and dolls, etc.) With a piled or textile surface	NA

Remark : P = Pass NA = Not Applicable



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Tests Conducted

30 Toxic Elements Analysis (Any Toy Material Except Modelling Clay and Finger Paint)

As per ISO 8124-3:2020, acid extraction method was used and toxic elements content were determined by Inductively Coupled Argon Plasma Spectrometry.

Element	Result (mg/kg)				Reporting Limit (mg/kg)	Limit (mg/kg)
	Tested Component					
	(1)	(2)	(3)	(4)		
Sol. Barium (Ba)	10*	8*	ND*	ND*	5	1000
Sol. Lead (Pb)	ND	ND	ND	ND	5	90
Sol. Cadmium (Cd)	ND	ND	ND	ND	5	75
Sol. Antimony (Sb)	ND	ND	ND	ND	5	60
Sol. Selenium (Se)	ND	ND	ND	ND	5	500
Sol. Chromium (Cr)	ND	ND	ND	ND	5	60
Sol. Mercury (Hg)	ND	ND	ND	ND	5	60
Sol. Arsenic (As)	ND	ND	ND	ND	2.5	25

Element	Result (mg/kg)		Reporting Limit (mg/kg)	Limit (mg/kg)
	Tested Component			
	(8)	(31)		
Sol. Barium (Ba)	12*	8*	5	1000
Sol. Lead (Pb)	ND	ND	5	90
Sol. Cadmium (Cd)	ND	ND	5	75
Sol. Antimony (Sb)	ND	ND	5	60
Sol. Selenium (Se)	ND	ND	5	500
Sol. Chromium (Cr)	ND	ND	5	60
Sol. Mercury (Hg)	ND	ND	5	60
Sol. Arsenic (As)	ND	ND	2.5	25



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Tests Conducted

Element	Result (mg/kg)	Reporting Limit (mg/kg)	Limit (mg/kg)
	Tested Component		
	(5)to(7), (9)to(24), (32)to(40), (46)to(53)		
Sol. Barium (Ba)	ND	5	1000
Sol. Lead (Pb)	ND	5	90
Sol. Cadmium (Cd)	ND	5	75
Sol. Antimony (Sb)	ND	5	60
Sol. Selenium (Se)	ND	5	500
Sol. Chromium (Cr)	ND	5	60
Sol. Mercury (Hg)	ND	5	60
Sol. Arsenic (As)	ND	2.5	25

ND = Not detected (less than reporting limit)

Sol. = Soluble

= The analytical results were adjusted by subtracting analytical correction factor.

Tested Component(s): See component list in the last section of this report

31 **Total Lead Content**

With reference to CPSC-CH-E1002-08.3 and/or CPSC-CH-E1001.08.3 and/or CPSC-CH-E1003-09.1 and followed by Inductively Coupled Argon Plasma Spectrometry.

Element	Result (mg/kg)	Reporting Limit (mg/kg)	Limit (mg/kg)
	Tested Component		
	(31)		
Lead (Pb)	ND	10	90

Element	Result (mg/kg)	Reporting Limit (mg/kg)	Limit (mg/kg)
	Tested Component		
	(1+2+3), (4+5+6), (7+8+9), (10+11+12), (13+14+15), (16+17+18), (19+20+21), (22+23+24), (32+33), (34+35+36), (37+38+39), (40), (46+47), (48+49), (50+51)		
Lead (Pb)	ND	10	100

The above limit was quoted from the Consent Judgment No. RG- 356892 settled by superior court of the State of California for the county of Alameda, for toys based on the California Proposition 65.

ND = Not detected (less than reporting limit)

Tested Component(s): See component list in the last section of this report



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Tests Conducted

32 Phthalate Content

With reference to CPSC-CH-C1001-09.4 and followed by Gas Chromatographic-Mass Spectrometric (GC-MS) analysis..

Test item	Result (%)	Reporting limit (%)	Limit (%)
	Tested component		
	(1+2+3), (4+5+6), (7+8+9), (10+11+12), (13+14+15), (16+17+18), (19+20+21), (22+23+24), (31), (32+33), (34+35+36), (37+38+39), (40), (46+47), (48+49), (50+51)		
Dibutyl phthalate (DBP)	ND	0.01	0.1
Di-(2-ethyl hexyl) phthalate (DEHP)	ND	0.01	0.1
Benzyl butyl phthalate (BBP)	ND	0.01	0.1
Di-iso-decyl phthalate (DIDP)	ND	0.01	0.1
Di-n-hexyl phthalate (DnHP)	ND	0.01	0.1
Di-iso-nonyl phthalate (DINP)	ND	0.01	--

The above limit was quoted from the Consent Judgment No. BG-350969 settled by superior court of the state of California for the county of Alameda, for toys (designed for or reasonable used by children under six years of age) based on the California Proposition 65.

ND = Not detected (less than reporting limit)

Tested Component(s): See component list in the last section of this report

33 Toxic Elements Analysis

Alkaline digestion method was used and Hexavalent Chromium was determined by UV-Visible Spectrophotometry; Acid digestion method was used and Lead, Cadmium and Mercury were determined by Inductively Coupled Argon Plasma Spectrometry.

Element	Result (ppm)	Reporting Limit (ppm)	Limit (ppm)
	Tested Component		
	(25+26), (27), (28+30), (29), (41+42), (43+44), (54)		
Lead (Pb)	ND	5	--
Cadmium (Cd)	ND	5	--
Mercury (Hg)	ND	5	--
Chromium VI (Cr (VI))	ND	5	--
Sum of Pb, Cd, Hg and Cr (VI)	ND	--	100

ppm = part per million = mg/kg

ND = Not detected (less than reporting limit)

Tested Component(s): See component list in the last section of this report



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Number: GZHH0038087403

Tests Conducted

34 Toxic Elements Analysis

As per Model Toxics in Packaging Legislation requirement of packaging and packaging components, 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.

Element	Result (ppm)	Reporting limit (ppm)	Limit (ppm)
	Tested component		
	(25+26), (27), (28+30), (29), (41+42), (43+44), (54)		
Lead (Pb)	ND	5	--
Cadmium (Cd)	ND	5	--
Mercury (Hg)	ND	5	--
Chromium VI (Cr (VI))	ND	5	--
Sum of Pb, Cd, Hg and Cr (VI)	ND	--	100

ppm = parts per million = mg/kg
ND = Not detected (less than reporting limit)

Tested Component(s): See component list in the last section of this report

35 Total Lead (Pb) Content

As per Illinois Lead Poisoning Prevention Act 410 ILCS 45, with reference to CPSC-CH-E1002-08.3 and/or CPSC-CH-E1001.08.3 and/or CPSC-CH-E1003-09.1 and followed by Inductively Coupled Argon Plasma Spectrometry.

(I) Surface coating

Element	Result (ppm)	Reporting Limit (ppm)	Warning Statement Limit (ppm)	Limit (ppm)
	Tested Component			
	(31)			
Lead (Pb)	ND	10	40	90



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(II) Non-Surface Coating (Substrate)

Element	Result (ppm)	Reporting Limit (ppm)	Limit (ppm)
	Tested Component		
	(1+2+3), (4+5+6), (7+8+9), (10+11+12), (13+14+15), (16+17+18), (19+20+21), (22+23+24), (32+33), (34+35+36), (37+38+39), (40), (46+47), (48+49), (50+51)		
Lead (Pb)	ND	10	100

ND = Not detected (less than reporting limit)
ppm = parts per million = mg/kg

Tested Component(s): See component list in the last section of this report

36 Short Chain Chlorinated Paraffins (C10 - C13) (SCCP) Content

Solvent extraction method was used, Short Chain Chlorinated Paraffin (C10 - C13) (SCCP) content was determined by Gas Chromatography-Mass Spectrometry (GC-MS).

Test Item	CAS No.	Result (%)	Reporting Limit (%)
		Tested Component	
		(1+2+3), (4+5+6), (7+8+9), (10+11+12), (13+14+15), (16+17+18), (19+20+21), (22+23+24), (32+45), (34+35+36), (37+38+39), (40), (46+47), (48+49), (50+51), (52+53)	
Short Chain Chlorinated Paraffins (C10 - C13) (SCCP)	85535-84-8	ND	0.005

Requirement:
Short Chain Chlorinated Paraffin's concentration should be lower than 0.15% in articles under Annex I Part A of the Regulation (EU) 2019/1021 on persistent organic pollutants (POPs).

ND = Not detected (less than reporting limit)

Tested Component(s): See component list in the last section of this report



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37 Organotin Content

With reference to ISO/TS 16179:2012, organotin content was determined by Gas Chromatography Mass Spectrometry (GC-MS) analysis.

Test item	Result (ppm)	Reporting limit (ppm)	Limit (ppm)
	Tested component		
	(1+2), (3+4), (5+6), (7+8), (9+10), (11+12), (13+14), (15+16), (17+18), (19+20), (21+22), (23+24), (32+45), (34+35), (36+37), (38+39), (40), (46+47), (48+49), (50+51), (52+53)		
Dibutyl Tin (DBT)	ND	0.025	0.05
Tributyl Tin (TBT)	ND	0.025	0.05
Diocetyl Tin (DOT)	ND	0.025	--
Triphenyl Tin (TPHT)	ND	0.025	--

ppm = parts per million = mg/kg
ND = Not detected

Tested Component(s): See component list in the last section of this report

38 Organotin Content

With reference to ISO/TS 16179:2012, organotin content was determined by Gas Chromatography Mass Spectrometry (GC-MS) analysis.

Test Item	Result (%) of Tin	Reporting Limit (%) of Tin	Limit (%) of Tin
	Tested Component		
	(1+2+3), (4+5+6), (7+8+9), (10+11+12), (13+14+15), (16+17+18), (19+20+21), (22+23+24), (32+45), (34+35), (36+37), (38+39), (40), (46+47), (48+49), (50+51), (52+53)		
Tri-substituted organotin [^]	ND	0.0001	0.1
Dibutyl Tin (DBT)	ND	0.0001	0.1
Diocetyl Tin (DOT)	ND	0.0001	0.1

The limit was quoted according to Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) and Amendment (EC) No 552/2009 and (EU) No 276/2010, Annex XVII Entry 20 on Organotin Content.

ND = Not detected (less than reporting limit)

[^] = The reported value was calculated by summation of the values of Tri-butyltin, Tri-phenyltin, Tri-methyltin, Tri-octyltin, Tri-cyclohexyltin

Tested Component(s): See component list in the last section of this report



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39 Polycyclic Aromatic Hydrocarbons (PAHs) Content

With reference to AfPS GS 2019:01 PAK (PAH), PAHs content was determined by Gas Chromatography-Mass Spectrometry (GC-MS).

Compound	CAS No.	Result (mg/kg)	Reporting Limit (mg/kg)	Limit (mg/kg)
		Tested Component		
		(1)to(24), (31)to(40), (46)to(51)		
Benzo[a]anthracene	56-55-3	ND	0.2	0.5
Chrysene	218-01-9	ND	0.2	0.5
Benzo[b]fluoranthene	205-99-2	ND	0.2	0.5
Benzo[k]fluoranthene	207-08-9	ND	0.2	0.5
Benzo[a]pyrene	50-32-8	ND	0.2	0.5
Dibenzo[a,h]anthracene	53-70-3	ND	0.2	0.5
Benzo[j]fluoranthene	205-82-3	ND	0.2	0.5
Benzo[e]pyrene	192-97-2	ND	0.2	0.5

The limit was quoted according to Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) and Amendment (EC) No 552/2009 and (EU) No 1272/2013, Annex XVII Entry 50 on Polycyclic Aromatic Hydrocarbons (PAHs) Content.

ND = Not detected (less than reporting limit)

Tested Component(s): See component list in the last section of this report



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40 Detection Of Amines Derived From Azocolourants and Azodyes

By Gas Chromatographic - Mass Spectrometric (GC-MS) Analysis.

Test Method : EN 14362-1 : 2012 for Textile Material

	Test item	Cas No.	Result (mg/kg)
			(52+53)
1	4-Aminodiphenyl	92-67-1	ND
2	Benzidine	92-87-5	ND
3	4-Chloro-o-Toluidine	95-69-2	ND
4	2-Naphthylamine	91-59-8	ND
5	o-Aminoazotoluene	97-56-3	ND
6	2-Amino-4-Nitrotoluene	99-55-8	ND
7	p-Chloroaniline	106-47-8	ND
8	2,4-Diaminoaniso	615-05-4	ND
9	4,4'-Diaminodiphenylmethane	101-77-9	ND
10	3,3'-Dichlorobenzidine	91-94-1	ND
11	3,3'-Dimethoxybenzidine	119-90-4	ND
12	3,3'-Dimethylbenzidine	119-93-7	ND
13	3,3'-Dimethyl-4,4'diaminodiphenylmethane	838-88-0	ND
14	p-Cresidine	120-71-8	ND
15	4,4'-Methylene-Bis(2-Chloroaniline)	101-14-4	ND
16	4,4'-Oxydianiline	101-80-4	ND
17	4,4'-Thiodianiline	139-65-1	ND
18	o-Toluidine	95-53-4	ND
19	2,4-Toluylenediamine	95-80-7	ND
20	2,4,5-Trimethylaniline	137-17-7	ND
21	o-Anisidine	90-04-0	ND
22	4-Aminoazobenzene	60-09-3	ND
23	2,4-Xylidine	95-68-1	ND
24	2,6-Xylidine	87-62-7	ND

ND = Not detected (less than detection limit)

Detection limit = 5mg/kg

Requirement = 30mg/kg

The results of additional amines (23-24) are reported for reference only.

Tested Component(s): See component list in the last section of this report



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Tests Conducted

41 Free Formaldehyde Content

As per test method ISO 14184-1:2011, formaldehyde content was determined by UV-Visible Spectrophotometer.

Test Item	Result (mg/kg)	Reporting Limit (mg/kg)	Limit (mg/kg)
	Tested Component		
	(52+53)		
Free Formaldehyde	ND	5	75

ND = Not detected (less than reporting limit)

Tested Component(s): See component list in the last section of this report

Component list:

- (1) Blue soft plastic (balloon).
- (2) Dark blue soft plastic (balloon).
- (3) Red soft plastic (balloon).
- (4) Yellow soft plastic (balloon).
- (5) Green soft plastic (balloon).
- (6) Purple soft plastic (balloon).
- (7) Pink soft plastic (balloon).
- (8) White soft plastic (balloon).
- (9) Orange soft plastic (balloon).
- (10) Blue plastic (base, tube).
- (11) Dark blue plastic (base, tube).
- (12) Red plastic (base, tube).
- (13) Yellow plastic (base, tube).
- (14) Green plastic (base, tube).
- (15) Purple plastic (base, tube).
- (16) Dark pink plastic (base, tube).
- (17) White plastic (base, tube).
- (18) Orange plastic (base, tube).
- (19) Dark purple plastic (joint).
- (20) Bright green plastic (joint).
- (21) Bright red plastic (joint).
- (22) Semi-transparent beige soft plastic (fastener of balloon).
- (23) Black soft plastic (washer of joint).
- (24) White plastic label with inaccessible coating (sticker).
- (25) White plastic sheet with transparent plastic film and inaccessible coatings (tag of balloon) (packaging).



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Component list:

- (26) Silver color plastic sheet with transparent plastic film and inaccessible coatings (polybag) (packaging).
 - (27) White paper sheet with printings (black, grey) (instruction) (packaging).
 - (28) Transparent plastic (windows of color box) (packaging).
 - (29) Brown/white paper card with multicolor coatings (color box of color box) (packaging).
 - (30) Transparent sellotape (fastener of color box) (packaging).
 - (31) White coating on soft plastic (letter of swim ring).
 - (32) Transparent green soft plastic (edge of swim ring).
 - (33) Dark blue soft plastic (body of swim ring).
 - (34) Light green soft plastic (body of swim ring).
 - (35) Semi-transparent soft plastic (washer of swim ring).
 - (36) Light orange plastic (lid of tube, joint of swim ring).
 - (37) Transparent adhesive plastic sheet (repair patch of swim ring).
 - (38) Dark blue plastic (handle of tool).
 - (39) Semi-transparent orange plastic (body of tool).
 - (40) White paper label with transparent plastic film and inaccessible coatings (sticker of tool, slingshot).
 - (41) Yellow paper sheet with transparent plastic film and black printing (base of repair patch) (packaging).
 - (42) Brown/grey/white paper board with transparent plastic film and inaccessible coatings (color box) (packaging).
 - (43) Transparent plastic (blister card) (packaging).
 - (44) Black plastic (cable tie) (packaging).
 - (45) Dark blue soft plastic with white coating (body of swim ring).
 - (46) Yellow plastic (handle of tool).
 - (47) Semi-transparent blue plastic (body of tool).
 - (48) Transparent green plastic (holder of slingshot).
 - (49) White plastic (holder of slingshot).
 - (50) Dark yellow plastic (handle of slingshot).
 - (51) Orange soft plastic (tube of slingshot).
 - (52) Dark blue woven (holder of slingshot).
 - (53) Blue woven (handle of slingshot).
 - (54) Semi-transparent plastic (cable tie) (packaging).
- *****



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Reference No. : 56226, 56288, 56288UQ1, 56288SK, 56288TVF, 56288F, 56288BTVF, 56291, 56292, 56292TQ1, 56296, 56297, 56298, 56299, 56300, 56301, 56302, 56303, 56304, 56305TQ1, 56306, 56307, 56308, 56308PL, 56309, 56310, 56311, 56312, 56313, 56314, 56315, 56316, 56317, 56318, 56318SLT, 56319, 56319UQ1, 56320, 56320UQ1, 56321, 56321UQ1, 56321SK, 56321F, 56321TVF, 56322UQ1, 56323, 56323UQ1, 56324, 56324UQ1, 56325, 56326, 56328, 56329, 56331, 56332, 56332SLT, 56333, 56334, 56335, 56336, 56337, 56337SLT, 56338, 56339, 56340, 56341, 56342, 56343, 56344, 56344SLT, 56345, 56345SLT, 56347, 56348, 56349, 56350, 56351, 56352, 56353SLT, 56354SLT, 56355, 56356, 56365, 56366, 56367, 56368, 56369SLT, 56371, 56372, 56373, 56374, 56375, 56376, 56377, 56378, 56379, 56380, 56381, 56382, 56383, 56384, 56385, 56386, 56387, 56388, 56389, 56390, 56391, 56392, 56393, 56394, 56395, 56396, 56397, 56398, 56399, 56400, 56401, 56402, 56403, 56404, 56405, 56406, 56407, 56408, 56409, 56410, 56411, 56412, 56413, 56414, 56415, 56416, 56417, 56418, 56419, 56420, 56421, 56422, 56423, 56424, 56425, 56426, 56427, 56428, 56429, 56430, 56431, 56432, 56433, 56434, 56435, 56436, 56437, 56438, 56439, 56440, 56441, 56442, 56443, 56444, 56445, 56446, 56447, 56448, 56449, 56450, 56451, 56452, 56453, 56454, 56455, 56366EC, 56370, 56370SLT, 56343SLT, 56456, 56457, 56458, 56459, 56460, 56461, 56288GUQ1, 56288BUQ1, 56288MUQ1, 56321UQ, 56288B, 56288G, 56288M, 56288UQ1, 56288UQ2, 56288UQ3, 56288UQ4, 56288TQ1, 56288GQ, 56288MQ, 56288BQ, 56288SLB, 56288SK, 56288TVF, 56288F, 56288BTVF, 56291, 56307, 56308, 56308PL, 56319, 56319UQ1, 56319SLB, 56320, 56320UQ1, 56321, 56321UQ1, 56321UQ2, 56321UQ3, 56321SLB, 56321SK, 56321F, 56321TVF, 56321BTVF, 56322UQ1, 56323, 56323UQ1, 56323UQ2, 56323UQ3, 56324UQ1, 56324SLB, 56325, 56326, 56329, 56337, 56337SLT, 56338, 56339, 56341, 56345, 56345SLT, 56347, 56353SLT, 56354SLT, 56368, 56368TQ1, 56381, 56396, 56397, 56398, 56407, 56409, 56410, 56410UQ1, 56410UQ2, 56414, 56415, MTVF105, MTVF106, MFD106, MBTVF106, MBTVF117, MFD117, MTVF132, MTVF134, MFD134, MBTVF134, MEC123, PL53, PL67, PL68, PL71, PL72, SLD04, SLD07, SLT04, 56292, 56292TQ1, 56309, 56310, 56342, 56348, 56356, 56366, 56366EC, 56386, 56401, MEC53, PL40, PL44, PL47, PL55, PL77, 56317, 56318, 56318SLT, 56343, 56343SLT, 56380, 56389, 56389SLT, 56395, MEC126, PLD04, PLD03, 5629, 5630, 5631, 5680PL, 5690, 56132, 56199, 56247, 56262PL, 56262SLB, 56272UQ1, 56291, 56292, 56300, 56316
Above sample information is submitted and/or identified by client



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End of report

The statements of conformity reported have considered the decision rule agreed, namely that Intertek have taken account of measurement uncertainty as calculated by Intertek, and applied according to ILAC-G8/09:2019 (Non-binary acceptance based on guard band $w = U$) except designation from the customer, regulation or test specification.

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