CARPENTERS MANUFACTORY LIMITED

Technical Report: **(8518)166-0719** September 10, 2018
Date Received: September 07, 2018

CARPENTERS MANUFACTORY LIMITED
HUANG JIN JI INDUSTRIAL ZONE,
SHANG JIE VILLAGE, QI SHI TOWN,
DONG GUAN CITY, GUANG DONG
PROVINCE, P.R.CHINA

Sample Description:	WALL ELEMENTS-MANUAL DEXTERITY BOARD I, WALL ELEMENTS-MANUAL DEXTERITY BOARD II, WALL ELEMENTS-LOCKERS BOARD 1.) A 2.) B 3.) C		
Vendor:	CARPENTERS MANUFACTORY LIMITED	Sample Size:	6
Manufacturer:	N/A	Style No(s):	ME12517/ME12524/ ME12531
Buyer:	N/A	SKN/SKU No.:	N/A
Labeled Age Grade:	3 YEARS +/ AGES 3 YEARS +	PO No.:	N/A
Appropriate Age Grade:	NOT REQUESTED	Ref #:	N/A
Client Specified Age Grade:	3+	Country of Origin:	CHINA
Tested Age Grade:	OVER 3 YEARS OF AGE	Assortment No.:	N/A
UPC Code:	N/A	Country of Destination:	GLOBAL

EXECUTIVE SUMMARY:

The sample(s) MEET the following requirement(s):

- The flammability requirements of 16 CFR 1500.3(c)(6)(vi), "Flammable solid" (FHSA regulations).
- The labeling requirements of ASTM F963-17, “Standard consumer safety specification for toy safety”.
- The mechanical hazards requirements of ASTM F963-17, “Standard consumer safety specification for toy safety”.
- The labeling requirements of the tested subclauses of the AS/NZS Standard, “Safety of toys”, AS/NZS 8124: Part 1: 2016.
- The mechanical and physical properties requirements of the tested subclauses of the AS/NZS Standard, “Safety of toys”, AS/NZS 8124: Part 1: 2016.
- The flammability requirements of the AS/NZS Standard, “Safety of toys”, AS/NZS 8124: Part 2: 2016.
- The mechanical and physical properties requirements of the tested subclauses of the European Standard, “Safety of toys”, EN71: Part 1:2014, clauses 1-7.
- The flammability requirements of the European Standard "Safety of Toys”, EN 71: Part 2: 2011+ A1: 2014.
- Labeling requirements of “CE marking, manufacturer/ Importer name and address, and product identification” under “Directive 2009/48/EC Safety of Toy”.

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EXECUTIVE SUMMARY:

The sample(s) MEET the following requirement(s):

- The mechanical hazards requirements of the tested sections of Canada Consumer Product Safety Act, Toys Regulations, SOR/2011-17 and Schedule 2.

- The cellulose nitrate requirements of Canada Toys Regulations, SOR/2011-17, section 21.

- The migration of certain elements requirements of the AS/NZS Standard, “Safety of toys”, AS/NZS 8124: Part 3: 2012 with Amendment No. 1: 2016.

- The migration of certain elements requirements of the AS/NZS ISO Standard, “Safety of toys”, AS/NZS ISO 8124: Part 3: 2012.

- The soluble heavy metals content in surface coating requirements of ASTM F963-17, "Standard Consumer Safety Specification for Toy Safety," Section 4.3.5.1(2).

- The soluble heavy metals content in substrate requirements of ASTM F963-17, "Standard Consumer Safety Specification for Toy Safety," Section 4.3.5.2(2)(b).

- The soluble heavy metals content in plastic requirement of Canada Consumer Product Safety Act, Toys Regulations, SOR/2011-17 Sec. 27(a) with Amendment in SOR/2016-302.

- The phthalates (BBP, DBP, DEHP, DINP, DIBP, DPENP, DHEXP & DCHP) content requirements of the Consumer Product Safety Improvement Act (CPSIA) of 2008 Sec. 108(a) and 108(c), 16 CFR 1307).

- The total lead content of 90ppm requirements of 16 CFR 1303, “Ban of lead-containing paint and certain consumer products bearing lead-containing paint” as mandated by Congress in section 101(f) of the Consumer Products Safety Improvement Act (CPSIA) of 2008, Public Law 110-314.

- The total lead content of 100ppm requirements by composite testing in substrate materials (Consumer Products Safety Improvement Act (CPSIA) of 2008).

- The diisobutyl phthalate (DIBP) content requirement in toys of the European Council Directive 2009/48/EC (and its amendments), Annex II, Part III, Point 3.

- The listed aromatic amines (azocolourants) content requirement of the European Regulation (EC) No. 1907/2006 of the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), Annex XVII concerning the Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles, Item no. 43, Points 1 and 2.

- The BBP, DBP and DEHP content requirements of the European Regulation (EC) No. 1907/2006 of the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), Annex XVII concerning the Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles, Item no. 51.

- The cadmium content requirement of the European Regulation (EC) No. 1907/2006 of the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), Annex XVII concerning the Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles, Item no. 23 (amended up to EU No. 2016/217).

EXECUTIVE SUMMARY:

The sample(s) MEET the following requirement(s):

- The DNOP, DINP and DIDP content requirements of the European Regulation (EC) No. 1907/2006 of the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), Annex XVII concerning the Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles, Item no. 52.

- The migration of certain elements in Category III - Scraped off toy material requirements of the European Standard, “Safety of Toys”, EN 71 Part 3: 2013+A2:2017.

- The 17 phthalates content requirements of the client’s specifications.

- The applicable heavy metals content requirements for surface coatings of the Canada Consumer Product Safety Act, Toys Regulations, SOR/2011-17 Sec. 23 with Amendment in SOR/2016-195.

- The extractable cadmium content in metallic small parts requirements of ASTM F963-17, "Standard Consumer Safety Specification for Toy Safety," Section 4.3.5.2 (2)(c).

- The initial total heavy metals content analysis for soluble heavy metals content in plastic requirement of Canada Consumer Product Safety Act, Toys Regulations, SOR/2011-17 Sec. 27(a) with Amendment in SOR/2016-302.

- The total lead content in surface coating requirements for products intended for use in play or learning for children under 3 years of age of the Canada Consumer Product Safety Act, Consumer Products Containing Lead (Contact with Mouth) Regulations SOR/2010-273 with Amendment in SOR/2016-171.

- The total lead content in substrate requirements for products intended for use in play or learning for children under 3 years of age of the Canada Consumer Product Safety Act, Consumer Products Containing Lead (Contact with Mouth) Regulations SOR/2010-273 with Amendment in SOR/2016-171.

Note: The sample(s) was not evaluated to the Normal Use testing requirements specified in ASTM F963-17, Section 8.5. It is the responsibility of the manufacturer, vendor or distributor to conduct tests that will simulate normal use conditions. These tests shall ensure that hazards are not generated through normal wear and deterioration of the sample(s). These tests shall also simulate the normal play mode of the toy and to simulate the expected mode of use of the particular toy. The tests shall be conducted in an expected use environment. These normal use tests shall simulate the intended use of the toy based on its estimated lifetime.

Note: According to the associated documents of Consumer Product Safety Improvement Act (CPSIA) of 2008, exemptions were granted to certain materials or products, such as natural materials / paper and similar materials / CMYK process printing inks / metal & alloys / electronics devices components / ordinary books / dyed & undyed textiles. Therefore, the lead content analysis of some components was not conducted.

Note: Based on visual evaluation and/or material breakdown received, there is no applicable material(s) found in the sample(s) submitted and thus the corresponding testing of EC Directive 2009/48/EC Formamide has/have not been conducted.

Note: Based on visual evaluation and/or material breakdown received, there is no polyvinyl chloride (PVC) found in the samples submitted and thus the corresponding testing of the Canada Consumer Product Safety Act, Phthalates Regulations, SOR/2016-188 regarding to the restriction of use of certain phthalates content have not been conducted.

EXECUTIVE SUMMARY:

Note: The composite test sample(s) of the submitted samples was prepared in the manner requested by the client, when subject to the test performed.

Note: The received sample(s) contained specimen of less than 0.2 g by weight on one single sample, therefore such specimen was not subjected to this requirement, according to test method EN ISO 14362-1: 2017, Section 9.2.

BUREAU VERITAS SHENZHEN CO., LTD.

Hon Yin Kan
Manager
Toys And Juvenile Products Department

HK/ is

RESULTS:

APPROPRIATE AGE GRADE DETERMINATION

The Appropriate Age Grade is determined with reference to the Age Determination Guidelines of the Consumer Product Safety Commission (CPSC); and the ASTM F963-17, "Standard Consumer Safety Specification for Toy Safety". Annex A1
Note : The most stringent age grade from the Labeled Age Grade and the Appropriate Age Grade will be used for testing. Note : If the client does not specify an age grade for testing or request Bureau Veritas Consumer Products Services, Inc. to determine an appropriate age grade, the labeled age grade will be used for testing.

USE AND ABUSE TESTS

The samples were undergo the tests in accordance with section 8.6 through 8.16, whichever is applicable

Test	Test Parameters	Standard Reference
Impact Test	4 x 3 ft	1500.53(b)
Torque Test	4 in-lbs	1500.53(e)
Tension Test	15 lbs	1500.53(f)
Compression Test	30 lbs	1500.53(g)

RESULTS:

PHYSICAL AND MECHANICAL HAZARDS (ASTM F963-17)

Section	Requirement	Result
4.1	Material Quality	M
4.3.7	Stuffing Materials	N/A
4.5	Sound-Producing Toys	N/A
4.6	Small Objects	N/A
4.7	Accessible Edges	M
4.8	Projections	N/A
4.9	Accessible Points	M
4.10	Wires and Rods	N/A
4.11	Nails and Fasteners	M
4.12	Plastic Film	N/A
4.13	Folding Mechanisms and Hinges	N/A
4.14	Cords, Straps and Elastics	N/A
4.15	Stability and Over-Load Requirements	N/A
4.16	Confined Spaces	N/A
4.17	Wheels, Tires, and Axles	N/A
4.18	Holes, Clearances and Accessibility of Mechanisms	M
4.19	Simulated Protective Devices	N/A
4.20	Pacifiers	N/A
4.21	Projectile Toys	N/A
4.22	Teethers and Teething Toys	N/A
4.23	Rattles	N/A
4.24	Squeeze Toys	N/A
4.25	Battery-Operated Toys (exclude Section 4.25.10 Battery-powered ride-on toys & Section 4.25.11 Toys that Contain Secondary Cells or Secondary Batteries)	N/A
4.26	Toys Intended to be Attached to a Crib or Playpen	N/A
4.27	Stuffed and Beanbag-Type Toys	N/A
4.30	Toy Gun Marking	N/A
4.32	Certain Toys with Nearly Spherical Ends	N/A
4.34	Small Balls	N/A
4.35	Pompoms	N/A
4.36	Hemispheric-Shaped Objects	N/A
4.37	Yo Yo Elastic Tether Toys	N/A
4.38	Magnets	N/A
4.39	Jaw Entrapment in Handles and Steering Wheels	N/A
4.40	Expanding Materials	N/A

M = Meet NM = Not Meet N/A = Not Applicable R = Refer to Comment Section

RESULTS:

LABELING AND INSTRUCTIONAL REQUIREMENT (ASTM F963-17)

Section	Requirement	Result
5.4 & 5.3	Aquatic Toys	N/A
5.5 & 5.3	Crib and Playpen Toys	N/A
5.6 & 5.3	Mobiles	N/A
5.7 & 5.3	Stroller and Carriage Toys	N/A
5.8 & 5.3	Toys Intended to be Assembled by an Adult	N/A
5.9 & 5.3	Simulated Protective Devices	N/A
5.10 & 5.3	Toys with Functional Sharp Edges or Sharp Points	N/A
5.11	Small Objects, Small Balls, Marbles and Balloons (16 CFR 1500.19)	N/A
5.12	Toy Caps (16CFR1500.86)	N/A
5.13	Art Materials (16 CFR 1500.14(b)(8))	N/A
5.15	Battery-Operated Toys (exclude 5.15.1 and 5.15.2)	N/A
5.15.1 & 5.3	Battery-Powered Ride-On Toys	N/A
5.15.2 & 5.3	Button or Coin Cell Batteries	N/A
5.16	Promotional Materials	M
5.17 & 5.3	Magnets	N/A
6.1	Definition and Description	M
6.2	Crib and Playpen Toys	N/A
6.3	Mobiles	N/A
6.4 & 5.3	Toys Intended to be Assembled by an Adult	N/A
6.5	Battery-Operated Toys	N/A
6.6	Battery-Powered Ride-On Toys	N/A
6.7	Toys in Contact with Food	N/A
7.1	Producer's Name and Address	M
7.2	Battery-Powered Ride-on Toys	N/A

M = Meet NM = Not Meet N/A = Not Applicable R = Refer to Comment Section

FLAMMABILITY (16 CFR SECTION 1500.3(c)6)(vi))

Requirement	Test Method Reference	Findings
Burn rate no greater than 0.1 of an inch per second	16 CFR 1500.44	Did not ignite.

RESULTS:

APPROPRIATE AGE GRADE DETERMINATION

The Appropriate Age Grade is determined with reference to the EN71 : Part 1 : 2014, CEN ISO/TR 8124-8:2016 Safety of toys - Part 8: Age determination guidelines prepared by Technical Committee CEN/TC 52 and Age Grade Determination Guidelines of the Consumer Product Safety Commission (CPSC).

Note : The most stringent age grade from the Labeled Age Grade and the Appropriate Age Grade will be used for testing.

Note : If the client does not specify an age grade for testing or request Bureau Veritas Consumer Products Services, Inc. to determine an appropriate age grade, the labeled age grade will be used for testing.

EXPLANATION OF THE ABBREVIATIONS FOR PART 1, 2 & 6

Symbol	Explanation
NM	The sample(s) DOES NOT MEET the requirement of this Subclause
M	The sample(s) MEET the requirement of this Subclause
N/A	Not Applicable
NR	Not Requested
NE	Not Evaluated
NT	Not Tested
NP	None Present
P	Present
R	Refer to Comment Section of this report

Symbol	Language Present	Symbol	Language Present	Symbol	Language Present
B	Belgian language	G	German language	PR	Portuguese language
D	Danish language	GR	Greek language	S	Spanish language
E	English language	H	Dutch language	SD	Swedish language
SF	Finnish language	I	Italian language	SZ	Swiss language
FR	French language	N	Norwegian language		

RESULTS:

MECHANICAL & PHYSICAL PROPERTIES
(EN 71: PART 1 – 2014)

Subclause	Requirement	Result
4.1	Material cleanliness	M
4.2	Assembly	NA
4.3	Flexible plastic sheeting	NA
4.4	Toy Bags	NA
4.5	Glass	NA
4.6	Expanding materials	NA
4.7 & 7.6	Edges	M
4.8 & 7.6	Points and metallic wires	M
4.8e	Splinters	M
4.9	Protruding parts	NA
4.10.1	Folding and sliding mechanisms	NA
4.10.2	Driving mechanisms	NA
4.10.3	Hinges	NA
4.10.4	Springs	NA
4.11	Mouth actuated toys and other toys intended to be put in the mouth	NA
4.12 & 7.3	Balloons	NA
4.13 & 7.9	Cord of toy kites and other flying toys	NA
4.14.1	Toys which a child can enter	NA
4.14.2 & 7.8	Masks and helmets	NA
4.15.1	Toys propelled by child	
4.15.1.2 & 7.10.1 & 7.10.2 & 7.10.3 & 7.10.4 & 7.16	Toys propelled by child – Instructions for use	NA
4.15.1.3	Toys propelled by child – Strength	NA
4.15.1.4	Toys propelled by child – Stability	NA
4.15.1.5	Toys propelled by child – Braking	NA
4.15.1.6	Toys propelled by child - Transmission	NA
4.15.1.7	Toys propelled by child – insertion mark	NA
4.15.1.8	Electrically-driven ride-on toys	NA
4.15.2	Toy bicycles	
4.15.2.2 & 7.15	Toy bicycles – Warnings and instructions for use	NA
4.15.2.3	Toy bicycles – Braking	NA
4.15.3 & 7.16 & 7.19	Rocking horses and similar toys	NA
4.15.4 & 7.16	Toys not propelled by child	NA
4.15.5 & 7.18	Toy scooters	NA
4.16	Heavy immobile toys	NA
4.17.1	Projectiles – General	NA
4.17.2	Projectiles toys without stored energy	NA

RESULTS:

MECHANICAL & PHYSICAL PROPERTIES
(EN 71: PART 1 – 2014)

Subclause	Requirement	Result
4.17.3 & 7.7	Projectile toys with stored energy	NA
4.17.4 & 7.7	Bows and arrows	NA
4.18 & 7.4	Aquatic toys and inflatable toys	NA
4.19 & 7.13 & 7.14	Percussion caps	NA
4.20.2.1-4.20.2.8, 4.20.2.10, 4.20.2.12	Acoustics	NA
4.20.2.9, 4.20.2.11 & 7.14	Acoustics – percussion toys & cap-firing toys	NA
4.21	Toys containing a non-electrical heat source	NA
4.22 & 7.2	Small balls	NA
4.23	Magnet	
4.23.2 a, b & c	Toy other than magnetic / electrical experimental sets intended for children over 8 years	NA
4.23.3 & 7.20	Magnetic / electrical experimental sets intended for children over 8 years	NA
4.24	Yo-yo ball	NA
4.25	Toys attached to food	NA
	FOR TOYS INTENDED FOR CHILDREN UNDER 36 MONTHS	
5	Cleaning instruction for item intended for child under 3 years of age	NA
5.1	General	NA
5.1a	Small parts – as received	NA
5.1b	Small parts, sharp points, sharp edges – after tests	NA
5.1c	Cross section <2mm metal points & wires	NA
5.1e	Toys contain glue	NA
5.1f	Casing of toys	NA
5.2	Fillings, coverings and seams	NA
5.3	Adhesion of plastic sheeting	NA
5.4 &	Cords on toys	NA
5.4(a)	Cords connected to self-retraction mechanism or in pull along toys	NA
5.4(b) & 7.22	Cords and chains that can form tangled loop or noose	NA
5.4(c) & 7.22	Fixed loop of cords or chains	NA
5.4(d)	Nooses	NA
5.4(e)	Self-retraction mechanism	NA
5.4(f) & 7.11	Toy across cradle, cot or perambulator	NA
5.4(g) & 7.22	Cords and chains with free end (exclude pull along toy)	NA
5.4(h)	Cords and chains with free end on pull along toy	NA
5.4(i) & 7.21	Electrical cables	NA
5.5 & 7.12	Liquid filled toys	NA

RESULTS:

MECHANICAL & PHYSICAL PROPERTIES
(EN 71: PART 1 – 2014)

Subclause	Requirement	Result
5.6	Electrically driven toys	NA
5.7	Glass and porcelain	NA
5.8	Shape and size	NA
5.9 & 7.17	Monofilament fibres	NA
5.10	Small balls	NA
5.11	Play figures	NA
5.12	Hemispheric shaped toys	NA
5.13	Suction cups	NA
5.14	Straps intended to be worn fully or partially around the neck	NA
6	Packaging	NA
	WARNINGS, INSTRUCTIONS FOR USE	
7.1	General	M
7.2	Toys not intended for children under 36 months	M
7.5	Functional toys	NA

RESULTS:

REQUIREMENTS & TEST METHODS CROSS REFERENCE TABLE FOR PART 1

Sub-clause	Test Method	Sub-clause	Test Method	Sub-clause	Test Method	Sub-clause	Test Method
4.3	8.25.1	4.14.2	8.3, 8.4.2.1, 8.5, 8.7, 8.8, 8.11, 8.12	4.17.3	8.24.1	5.3	8.4.2.1, 8.25
4.5	8.5, 8.7, 8.11, 8.12	4.15.1.3	8.11, 8.12, 8.21, 8.22	4.17.4	8.24.2	5.4	8.20, 8.36, 8.38, 8.39, 8.40
4.6	8.2, 8.3, 8.4.2.1, 8.5, 8.7, 8.8, 8.14	4.15.1.4	8.23.1	4.18	8.2, 8.3, 8.4.2.1	5.5	8.15
4.7	8.11	4.15.1.5	8.26.1	4.20	8.28	5.6	8.29
4.8	8.12, 8.13	4.15.1.8	8.29	4.21	8.30	5.8	8.16
4.9	8.4.2.3, 8.11, 8.12	4.15.2.4	8.26.2	4.22	8.3, 8.4.2.1, 8.5, 8.6, 8.7, 8.8, 8.32	5.10	8.3, 8.4.2.1, 8.5, 8.6, 8.7, 8.8, 8.9, 8.32
4.10.1	8.18.2, 8.18.3	4.15.3	8.21, 8.23.1	4.23	8.2, 8.3, 8.4.2.1, 8.4.2.2, 8.5, 8.6, 8.7, 8.8, 8.34, 8.35	5.11	8.33
4.10.2	8.5, 8.6, 8.7, 8.11, 8.12	4.15.4	8.21, 8.23.1	4.24	8.37	5.12	8.3, 8.4.2.1, 8.5, 8.6, 8.7, 8.8, 8.9,
4.11	8.2, 8.3, 8.4.2.1, 8.9, 8.17	4.15.5	8.11, 8.12, 8.21, 8.22, 8.26.3, 8.27	4.25	8.2, 8.3, 8.4.2.1, 8.5, 8.7, 8.8, 8.32.1	5.13	8.3, 8.4.2.1, 8.5, 8.7, 8.8, 8.32
4.13	8.19	4.16	8.23.2	5.1	8.2, 8.3, 8.4.2.1, 8.5, 8.7, 8.8, 8.9, 8.11, 8.12		
4.14.1	8.31.1, 8.31.2	4.17.1	8.4.2.3				

RESULTS:

FLAMMABILITY (EN 71 PART 2: 2011 + A1: 2014)

Subclause	Requirement	Result
4.1	Cellulose nitrate	NP
4.1	Surface flash on a piled surface	NA
4.1	Flammable gases	NA
4.1	Extremely flammable liquids, highly flammable liquids, flammable liquids and flammable gels	NA
4.2	Toys to be worn on the head	NA
4.3	Toy disguise costumes and toys intended to be worn by child in play	NA
4.3	warning on product and packaging (10 - 30 mm/s)	NA
4.4	Toys intended to be entered by a child	NA
4.4	warning on product and packaging (10 – 30 mm/s)	NA
4.5	Soft-filled toys	NA

REQUIREMENTS & TEST METHODS CROSS REFERENCE TABLE FOR PART 2

Sub-clause	Test Method	Sub-clause	Test Method	Sub-clause	Test Method	Sub-clause	Test Method
4.2.2	5.2	4.2.4	5.3	4.3	5.4	4.5	5.5
4.2.3	5.3	4.2.5	5.4	4.4	5.4	-	-

2009/48/EC General Labeling Requirement

Requirement	Result
CE Mark	M
Manufacturer/ Importer name and address	M
Product Identification	M

M = Meet NM = Not Meet N/A = Not Applicable R = Refer to Comment Section

RESULTS:

APPROPRIATE AGE GRADE DETERMINATION

The Appropriate Age Grade is recommended with reference to the Toys: Age Classification Guidelines (1998-01-13) of the Product Safety Bureau, Health Canada.

Note : The most stringent age grade from the Labeled Age Grade and the Appropriate Age Grade will be used for testing.

Note : If the client does not specify an age grade for testing or request Bureau Veritas Consumer Products Services, Inc. to determine an appropriate age grade, the labeled age grade will be used for testing.

CANADA CONSUMER PRODUCT SAFETY ACT

Test Method : CANADA CONSUMER PRODUCT SAFETY ACT

REASONABLY FORESEEABLE USE TESTS	
Test	**Test Parameters**
Drop	4 x 3 ft
Push/Pull	10 lbs

RESULTS:

CANADA CONSUMER PRODUCT SAFETY ACT, TOYS REGULATIONS, SOR/2011-17

Section	Parameter / Requirement	Result
Mechanical Hazards		
4	Flexible film bag used for package	NA
7	Small Toys and Detachable component	NA
8	Metal edge	M
9	Wires frames	M
10	Plastic Edges	M
11	Wood	M
12	Glass	NA
13	Nails and fasteners	M
14	Safety stops/Locking Device for Folding product	NA
15 (a, b)	Moving Mechanism	NA
15 (c)	Non- Detachable Winding Key Clearance	NA
15 (d)	Detachable Key	NA
16	Projectile Toy	NA
17	Enclosures	NA
18	Stability	NA
19	Auditory hazards	NA
Specific Products - Dolls, Plush Toys and Soft Toys		
28	Exposed Sharp Points and Edges	NA
29. (a)	Stuffing Materials shall be clean and free from vermin	NA
29. (b)	Stuffing Materials shall be free from hard and sharp foreign matter	NA
30	Squeaker, Reed and Valve	NA
31	Eyes and Nose	NA
Specific Products		
35*&36*	Plant seeds	NA
37	Pull and Push toys	NA
38*	Toys Steam engine Boilers	NA
39*	Finger Paints	NA
40(a)	Rattles – Sharp wire	NA
40(b, c)	Rattles – Impaction	NA
41	Elastic	NA
42	Yo-Yo type balls	NA

RESULTS:

CANADA CONSUMER PRODUCT SAFETY ACT, SCHEDULE 2

Section	Parameter / Requirement	Result
Mechanical Hazards		
1*	Jequirity Beans	M
8*	Kites	NA
9	Kite strings	NA
14*	Lawn, darts with elongated tips	NA

M = Meet NM = Not Meet NA = Not Applicable R = Refer to Comment Section
** = Non-accreditated section*

FLAMMABILITY OF CELLULOSE NITRATE

TOY REGULATIONS SOR/2011-17 SECTION 21

Requirement Reference	Observation	Flammability Classification
Section 21	No Flash Effect	M

M = Meet NM-See comment = Not Meet - Refer to Comment Section NA = Not Applicable

RESULTS:

APPROPRIATE AGE GRADE DETERMINATION

The Appropriate Age Grade is determined with reference to the Age-grading guidelines of the Annex A of the AS/NZS ISO Standard, “Safety of toys”, ISO 8124:Part 1:2016.	
Note :	The most stringent age grade from the Labeled Age Grade and the Appropriate Age Grade will be used for testing.
Note :	If the client does not specify an age grade for testing or request Bureau Veritas Consumer Products Services, Inc. to determine an appropriate age grade, the labeled age grade will be used for testing.

RESULTS:

MECHANICAL & PHYSICAL PROPERTIES – (AS/NZS 8124.1:2016)

Subclause	Requirement	Result
4.1	Normal use	M
4.2	Reasonably foreseeable abuse	M
4.3	Material	-
4.3.1	Material quality	M
4.3.2	Expanding materials	N/A
4.4	Small parts	-
4.4.1	Small parts (under 36 months)	N/A
4.4.2	Small parts warning (36 months and over but under 72 months)	N/A
4.5	Shape, size and strength of certain toys	-
4.5.1	Squeeze toys, rattles, fasteners, and certain other toys and components of toys	N/A
4.5.2a	Small ball (under 36 months)	N/A
4.5.2b	Small ball warning (36 months and over but under 96 months)	N/A
4.5.3	Pompoms	N/A
4.5.4	Pre-school play figures	N/A
4.5.5	Toy pacifiers	N/A
4.5.6	Balloons Warning	N/A
4.5.7	Marbles Warning	N/A
4.5.8	Hemispheric-shaped toys	N/A
4.6	Edges	-
4.6.1	Accessible sharp edges of glass or metal	M
4.6.2	Functional sharp edges warning	N/A
4.6.3	Edges on metal toys	N/A
4.6.4	Edges on moulded toys	M
4.6.5	Edges on exposed bolts or threaded rods	N/A
4.7	Points	-
4.7.1	Accessible sharp points	M
4.7.2	Functional sharp points warning	N/A
4.7.3	Wooden toys	M
4.8	Projections	-
4.8.1	General	N/A
4.8.2	Special considerations for bath toy projections	-
4.9	Metal wires and rods	-
4.9a	Metal wires and rods intended to be bent	N/A
4.9b	Metal wires and rods likely to be bent	N/A
4.9c	End of spokes	N/A
4.10	Plastic film or plastic bags in packaging and in toys	N/A
4.11	Cords and elastics	-
4.11.1	Cords and elastics (under 18 months)	N/A
4.11.2	Self-retracting pull cords (under 18 months)	N/A
4.11.3	Cords for pull toys (under 36 months)	N/A

RESULTS:

MECHANICAL & PHYSICAL PROPERTIES – (AS/NZS 8124.1:2016)

Subclause	Requirement	Result
4.11.4	Cords on toy bags	N/A
4.11.5	Crib or playpen toys and mobiles warning & instruction for use	N/A
4.11.6	Crib gyms and similar toys warning & instruction for use	N/A
4.11.7	Cords, strings and lines for flying toys	N/A
	Warning - Toy kites and other flying toys with cord	N/A
4.12	Folding mechanisms	-
4.12.1	Toy pushchairs, perambulators and similar toys	N/A
4.12.2	Other toys with folding mechanisms	N/A
4.12.3	Hinge-line clearance	N/A
4.13	Holes, clearances and accessibility of mechanisms	-
4.13.1	Circular holes in rigid materials (under 60 months)	M
4.13.2	Accessible clearances for movable segments (under 96 months)	N/A
4.13.3	Chains or belts in ride-on toys	N/A
4.13.4	Other driving mechanisms	N/A
4.13.5	Winding keys (under 36 months)	N/A
4.14	Springs	N/A
4.15	Stability and overload requirements	-
4.15.1	Stability of ride-on toys and seats (under 60 months)	-
4.15.1.1	Sideways stability, feet available for stabilization	N/A
4.15.1.2	Sideways stability, feet unavailable for stabilization	N/A
4.15.1.3	Fore and aft stability	N/A
4.15.2	Overload requirements for ride-on toys and seats	N/A
4.15.3	Stability of stationary floor toys	N/A
4.16	Enclosures	-
4.16.1	Ventilation	N/A
4.16.2	Closures	-
4.16.2.1	Lids, doors and similar devices	N/A
4.16.2.2	Lid support for toy chests and similar toys	N/A
	Instruction for assembly	N/A
4.16.3	Toys that enclose the head	N/A
4.17	Simulated protective equipment	N/A
	Warning	N/A
4.18	Projectile toys	-
4.18.1	General	-
4.18.2	Projectiles	N/A
4.18.3	Projectile toys with stored energy	N/A
	Instruction for use	N/A
4.18.4	Projectile toys without stored energy	N/A
	Instruction for use	N/A
4.19	Rotors and propellers	N/A

RESULTS:

MECHANICAL & PHYSICAL PROPERTIES – (AS/NZS 8124.1:2016)

Subclause	Requirement	Result
4.20	Aquatic toys	N/A
	Warning	N/A
4.21	Braking	N/A
4.22	Toy bicycles	-
4.22.1	Toy bicycles – Instruction for use	N/A
4.22.2	Toy bicycles – Maximum saddle height	N/A
4.22.3	Toy bicycles – Braking requirements	N/A
4.23	Speed limitation of electrically driven ride-on toys	N/A
4.24	Toys containing a heat source	N/A
4.25	Liquid-filled toys	N/A
	Warning	N/A
4.26	Mouth-actuated toys	N/A
4.27	Toy roller skates, toy inline skates and toy skateboards	N/A
	Warning	N/A
4.28	Percussion caps	N/A
	Warning	N/A
4.29	Acoustic requirement	N/A
	Warning	N/A
4.30	Toy scooters	N/A
4.31	Magnets and magnetic components	-
4.31.1	Magnetic/electrical experimental sets (for children 8 years and over)	N/A
	Warning	N/A
4.31.2	All other toys with magnets and magnetic components (under 8 years)	-
4.31.2 a	Loose-as-received magnet(s) and magnetic component(s)	N/A
4.31.2 b	Wooden toys, toys intended in water and mouth pieces of mouth-actuated toys with magnets or magnetic components	N/A
4.31.2 c	Magnet(s) and magnetic component(s) liberated from toy	N/A

M = Meet NM = Not Meet N/A = Not Applicable R = Refer to Comment Section

RESULTS:

FLAMMABILITY (AS/NZS 8124.2: 2016)

Subclause	Requirement	Result
4.1	Celluloid (cellulose nitrate)	NP
4.1	Surface flash on a piled surface	NA
4.1	Flammable Gases	NA
4.1	Extremely flammable liquids, highly flammable liquids, flammable liquids and flammable gels	NA
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
4.3	warning on product and packaging (10 - 30 mm/s)	NA
4.4	Toys intended to be entered by a child	NA
4.4	warning on product and packaging (10 - 30 mm/s)	NA
4.5	Soft - filled toys	NA

M = Meet NM = Not Meet N/A = Not Applicable R = Refer to Comment Section P = Present NP = Not Present

RESULTS:

TOTAL LEAD CONTENT IN SURFACE COATING ("Ban of Lead-containing paint and certain consumer products bearing Lead-containing paint", Consumer Product Safety Improvement Act (CPSIA) of 2008)

Test Method: U.S. CPSC-CH-E1003.09.1:2011

Analyte	Lead	
Requirement: Maximum allowable limit:	90 mg/kg	

Analyte				Lead (Pb)	Conclusion
Sample Description				Result	
Color / Component		Location	Style	(mg/kg)	
(A)	Clear coating	Board	A-C	LT 10	Pass
(B)	Bright orange coating	Pattern	A-C	LT 10	Pass
(C)	Deep orange coating	Pattern	C	LT 10	Pass
(D)	Green coating	Pattern	A-C	13	Pass
(E)	Aqua green coating	Pattern	C	LT 10	Pass
(F)	Blue coating	Pattern	A-C	19	Pass
(G)	Aqua blue coating	Pattern	C	LT 10	Pass
(H)	Red coating	Button	B	LT 10	Pass
(I)	White coating	Pattern	C	LT 10	Pass

LT = Less Than *mg/kg =milligrams per kilogram (ppm=parts per million)*
** = Average of duplicate analyses*

Remark:

In some cases, the tested component cannot be tested individually due to overlapped coatings.

RESULTS:

TOTAL LEAD CONTENT IN SUBSTRATE BY COMPOSITE TESTING (100PPM) (Consumer Product Safety Improvement Act (CPSIA) of 2008)

Test Method: U.S. CPSC-CH-E1001-08.1 (June 21, 2010) or U.S. CPSC-CH-E1002-08.1 (June 21, 2010).

Analyte	Lead	
Requirement: Maximum allowable limit:	100 mg/kg	

Analyte				Lead (Pb)	Conclusion
Sample Description				Result	
	Color / Component	Location	Style	(mg/kg)	
(A)	flesh plastic	screw	A-C	LT 10	Pass
(B)	black plastic white soft plastic	buckle elastic band	A A	LT 10	Pass
(C)	translucent plastic	zipper teeth	B	LT 10	Pass
(D)	white plastic	button	B	LT 10	Pass
(E)	soft white plastic	inner door	C	LT 10	Pass
(F)	silvery metal	screw on back of wood board	A-C	LT 10	Pass
(G)	bright silvery metal	body of hook	A	LT 10	Pass
(H)	light silvery metal	arm of hook	A	LT 10	Pass
(I)	matt silvery metal	bolt of hook	A	LT 10	Pass
(J)	flat silvery metal	nut of hook	A	LT 10	Pass
(K)	soft silvery metal	lock	A	LT 10	Pass
(L)	sharp silvery metal	loop of lock	A	LT 10	Pass
(M)	dark silvery metal	plate back of lock	A	57	Pass
(N)	dull silvery metal	zipper slider	B	26	Pass
(O)	deep silvery metal	zipper puller	B	34	Pass
(P)	pale silvery metal	cap of famale snap	B	LT 10	Pass
(Q)	bright pale silvery metal	famale snap	B	LT 10	Pass
(R)	light pale silvery metal	wire inner famale snap	B	LT 10	Pass
(S)	matt pale silvery metal	male snap	B	LT 10	Pass
(T)	flat pale silvery metal	back of male snap	B	LT 10	Pass
(U)	soft pale silvery metal	hinge	C	LT 10	Pass
(V)	sharp pale silvery metal	screw of hinge and lock	C	LT 10	Pass
(W)	golden metal	axle of hinge	C	LT 10	Pass
(X)	dull pale silvery metal	lock of blue door	C	LT 10	Pass

RESULTS:

TOTAL LEAD CONTENT IN SUBSTRATE BY COMPOSITE TESTING (100PPM) (Consumer Product Safety Improvement Act (CPSIA) of 2008)

Test Method: U.S. CPSC-CH-E1001-08.1 (June 21, 2010) or U.S. CPSC-CH-E1002-08.1 (June 21, 2010).

Analyte	Lead	
Requirement: Maximum allowable limit:	100 mg/kg	

Analyte				Lead (Pb)	Conclusion
Sample Description				Result (mg/kg)	
Color / Component		Location	Style		
(Y)	deep pale silvery metal	chain of lock of blue door	C	LT 10	Pass
(Z)	pale bright silvery metal	fixer of chain of lock of blue door	C	LT 10	Pass
(AA)	dark pale silvery metal	insert part on chain of lock of blue door	C	LT 10	Pass
(AB)	bright deep silvery metal	latch of green door	C	22	Pass
(AC)	light deep silvery metal	screw of latch of green door and orange door	C	LT 10	Pass
(AD)	matt deep silvery metal	axle of latch of green door	C	21	Pass
(AE)	flat deep silvery metal	hook of orange door	C	28	Pass
(AF)	soft deep silvery metal	fixer of hook of orange door	C	36	Pass
(AG)	sharp deep silvery metal	loop on fixer of hook of orange door	C	29	Pass
(AH)	dark deep silvery metal	lock cylinder of orange door	C	LT 10	Pass
(AI)	dull deep silvery metal	rim of lock cylinder of orange door	C	22	Pass
(AJ)	deep dull silvery metal	spring bolt of lock of orange door	C	LT 10	Pass
(AK)	pale deep silvery metal	back of lock of orange door	C	LT 10	Pass
(AL)	bright soft silvery metal	axle of lock of orange door	C	15	Pass
(AM)	light soft silvery metal	coded lock of red door	C	LT 10	Pass
(AN)	matt soft silvery metal	sping bolt of of coded lock of red door	C	26	Pass
(AO)	flat soft silvery metal	number key of coded lock of red door	C	30	Pass
(AP)	soft dark silvery metal	back of coded lock	C	LT 10	Pass
(AQ)	sharp soft silvery metal	buckle of yellow door	C	LT 10	Pass
(AR)	dark soft silvery metal	axle of buckle of yellow door	C	LT 10	Pass

RESULTS:

TOTAL LEAD CONTENT IN SUBSTRATE BY COMPOSITE TESTING (100PPM) (Consumer Product Safety Improvement Act (CPSIA) of 2008)

Test Method: U.S. CPSC-CH-E1001-08.1 (June 21, 2010) or U.S. CPSC-CH-E1002-08.1 (June 21, 2010).

Analyte	Lead	
Requirement: Maximum allowable limit:	100 mg/kg	

Analyte				Lead (Pb)	Conclusion
Sample Description				Result (mg/kg)	
Color / Component		Location	Style		
(AS)	dull soft silvery metal	fixer of buckle of yellow door	C	44	Pass
(AT)	deep soft silvery metal	loop on fixer of buckle of yellow door	C	50	Pass
(AU)	pale soft silvery metal	lock of green door	C	LT 10	Pass
(AV)	bright golden metal	lock cylinder of green door	C	62	Pass
(AW)	bright light silvery metal	button of lock of green door	C	LT 10	Pass
(AX)	light bright silvery metal	loop of lock of green door	C	LT 10	Pass
(AY)	matt light silvery metal	thick axle on button of lock of green door	C	LT 10	Pass
(AZ)	flat light silvery metal	thin axle on button of lock of green door	C	LT 10	Pass
(BA)	soft light silvery metal	keys	C	LT 10	Pass
(BB)	bright light silvery metal	key ring	C	LT 10	Pass
(BC)	sharp bright silvery metal	big screw of handle of door	C	LT 10	Pass
(BD)	ivory plastic	button	B	LT 10	Pass
(BE)	Bright flesh wood	Wood board	A-C	LT 10	Pass
(BF)	light brown wood	Inner board	C	LT 10	Pass

LT = Less Than *mg/kg = milligrams per kilogram (ppm = parts per million)*
** = Average of duplicate analyses*

RESULTS:

SOLUBLE HEAVY METALS CONTENT IN SURFACE COATING (ASTM F963-17, Section 4.3.5.1(2))

Test Method: ASTM International Standard ASTM F963-17, Section 8.3.2 to 8.3.4

Sample Identity	Color	Location	Style
A.	Clear coating	Board	A-C
B.	Bright orange coating	Pattern	A-C
C.	Deep orange coating	Pattern	C
D.	Green coating	Pattern	A-C
E.	Aqua green coating	Pattern	C
F.	Blue coating	Pattern	A-C
G.	Aqua blue coating	Pattern	C
H.	Red coating	Button	B
I.	White coating	Pattern	C

Analyte	As	Ba	Cd	Cr	Hg	Pb	Sb	Se
Maximum Limit (mg/kg)	25	1000	75	60	60	90	60	500
Analytical Correction	60%	30%	30%	30%	50%	30%	60%	60%

Analyte	As	Ba	Cd	Cr	Hg	Pb	Sb	Se	Mass of Trace Amount	Conclusion
Sample	Result (mg/kg)								(g)	
A.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	0.0503	Pass
B.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
C.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
D.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
E.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
F.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
G.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
H.	LT 2	3	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
I.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass

LT = Less Than
CR = adjusted analytical result
mg/kg = milligrams per kilogram (ppm=parts per million)
** = Average of duplicate analysis*

As = Arsenic, Ba = Barium, Cd = Cadmium,
Cr = Chromium, Hg = Mercury, Pb = Lead,
Sb = Antimony, Se = Selenium

RESULTS:

SOLUBLE HEAVY METALS CONTENT IN SUBSTRATE (ASTM F963-17, Section 4.3.5.2(2)(b))

Test Method: ASTM International Standard ASTM F963-17, Section 8.3.5 (Excluding 8.3.5.5(3))

Sample Identity	Color	Location	Style
Type I: Substrate other than modeling clay			
A	flesh plastic	screw	A-C
B	black plastic	buckle	A
C	white soft plastic	elastic band	A
D	translucent plastic	zipper teeth	B
E	ivory plastic	button	B
F	white plastic	button	B
G	soft white plastic	inner door	C
H	soft light silvery metal	keys	C
I	bright light silvery metal	key ring	C
J	white fabric	elastic band	A
K	red thread/ red felt	pocket	A,B
L	orange thread/ orange felt	pocket	A
M	blue thread/ blue felt	pocket	A,B
N	green thread/ green felt	pocket	A,B
O	yellow thread/ yellow felt	pocket	A,B
P	purple thread/ purple felt	pocket	A,B
Q	bright red felt	pocket	A,B
R	bright purple felt	pocket	A,B
S	yellow strap	belt	A
T	blue wide ribbon/ deep blue thread	belt	A
U	soft blue narrow ribbon	belt	A
V	red ribbon	belt	A
W	yellow hook and loop fastener	fastener	A
X	violet thread/ violet felt	pocket	B
Y	grey fabric	zipper band	B
Z	red strap	belt of keys	C
AA	Bright flesh wood	Wood board	A-C

RESULTS:

SOLUBLE HEAVY METALS CONTENT IN SUBSTRATE (ASTM F963-17, Section 4.3.5.2(2)(b))

Test Method: ASTM International Standard ASTM F963-17, Section 8.3.5 (Excluding 8.3.5.5(3))

Analyte	As	Ba	Cd	Cr	Hg	Pb	Sb	Se
Max. Limit Type I (mg/kg)	25	1000	75	60	60	90	60	500
Max. Limit Type II (mg/kg)	25	250	50	25	25	90	60	500
Analytical Correction	60%	30%	30%	30%	50%	30%	60%	60%

Analyte	As	Ba	Cd	Cr	Hg	Pb	Sb	Se	Mass of Trace Amount	Conclusion
Sample	Result (mg/kg)								(g)	
A.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
B.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
C.	LT 2	95	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	0.0411	Pass
D.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
E.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
F.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	0.0925	Pass
G.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
H.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
I.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
J.	LT 2	14	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
K.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	6	LT 2	-	Pass
L.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	32	LT 2	-	Pass
M.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	3	LT 2	-	Pass
N.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
O.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass

RESULTS:

SOLUBLE HEAVY METALS CONTENT IN SUBSTRATE (ASTM F963-17, Section 4.3.5.2(2)(b))

Test Method: ASTM International Standard ASTM F963-17, Section 8.3.5 (Excluding 8.3.5.5(3))

Analyte	As	Ba	Cd	Cr	Hg	Pb	Sb	Se
Max. Limit Type I (mg/kg)	25	1000	75	60	60	90	60	500
Max. Limit Type II (mg/kg)	25	250	50	25	25	90	60	500
Analytical Correction	60%	30%	30%	30%	50%	30%	60%	60%

Analyte	As	Ba	Cd	Cr	Hg	Pb	Sb	Se	Mass of Trace Amount	Conclusion
Sample	Result (mg/kg)								(g)	
P.	LT 2	3	LT 2	LT 2	LT 2	LT 2	4	LT 2	-	Pass
Q.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	7	LT 2	-	Pass
R.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	5	LT 2	-	Pass
S.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
T.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
U.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
V.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
W.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
X.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	7	LT 2	-	Pass
Y.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
Z.	LT 2	11	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
AA.	LT 2	4	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass

mg/kg = milligrams per kilogram (ppm=parts per million)
CR = adjusted analytical result
LT = Less Than
ND = None Detected

As = Arsenic, Ba = Barium, Cd = Cadmium,
Cr = Chromium, Hg = Mercury, Pb = Lead,
Sb = Antimony, Se = Selenium
Detection limit (mg/kg): Each element 2

Remark:
Textiles (natural or synthetic) are exempted for lead content requirement according to clarification of Toy Industry Association for ASTM F963-17. The lead content analysis result of corresponding material herein is for client's reference only.

RESULTS:

EXTRACTABLE CADMIUM IN METALLIC SMALL PARTS (ASTM F963-17, Section 4.3.5.2 (2)(c))

Test method: U. S. CPSC-CH-E1004-11 (February 03, 2011), Section 5

Analyte	Extractable Cadmium	
Requirement: Maximum allowable limit:	200 µg /sample	

Analyte				Cadmium (Cd)	Conclusion
Sample Description				Result	
Color / Component		Location	Style	(µg /sample)	
(A)	soft light silvery metal	keys	C	LT 2	Pass
(B)	bright light silvery metal	key ring	C	LT 2	Pass

LT = Less Than *µg /sample = micrograms per sample*
** = Average of duplicate analyses*

RESULTS:

TOTAL HEAVY METALS CONTENT – INITIAL ANALYSIS FOR SOLUBLE HEAVY METALS CONTENT IN PLASTIC (Canada Consumer Product Safety Act - Toys Regulations, SOR/2011-17 Sec. 27(a) with Amendment in SOR/2016-302)

Sample Identity	Color	Location	Style
A	black plastic white soft plastic	buckle elastic band	A A
B	translucent plastic	zipper teeth	B
C	flesh plastic	screw	A,B
D	ivory plastic	button	B

Analyte	As	Ba	Cd	Cr	Hg	Sb	Se	
Maximum Limit (mg/kg)	25	1000	75	60	60	60	500	

Analyte	As	Ba	Cd	Cr	Hg	Sb	Se	
Sample	Result (mg/kg)							Conclusion
A	LT 7	7500	LT 10	19	LT 5	LT 10	LT 10	DATA
B	LT 7	LT 10	LT 10	LT 7	LT 5	64	LT 10	DATA
C	LT 7	LT 10	LT 10	LT 7	LT 5	LT 10	LT 10	PASS
D	LT 7	LT 10	LT 10	LT 7	LT 5	LT 10	LT 10	PASS

mg/kg = milligrams per kilogram (ppm=parts per million)
**= Average of duplicate analysis*
ND = Not detected
LT = Less Than
Detection limit (mg/kg): As and Cr = 7, Hg = 5, other elements = 10

As = Arsenic, Ba = Barium, Cd = Cadmium, Cr = Chromium, Hg = Mercury, Sb = Antimony, Se = Selenium

On an initial analysis for soluble heavy metals content, any individually tested component of greater than the set limit or any composite tested components of greater than 80% of the set limit, the result is inconclusive for the requirement and therefore were retested with soluble heavy metals analysis. The result herein is for reference only (show data), please refer to soluble heavy metals content analysis for the corresponding conclusive results.

RESULTS:

SOLUBLE HEAVY METALS CONTENT IN PLASTIC (Canada Consumer Product Safety Act - Toys Regulations, SOR/2011-17 Sec. 27(a) with Amendment in SOR/2016-302)

Test Method: ASTM International Standard ASTM F963-16, Section 8.3.5 (Excluding 8.3.5.5(3))

Sample Identity	Color	Location	Style
A	flesh plastic	screw	A-C
B	black plastic	buckle	A
C	white soft plastic	elastic band	A
D	translucent plastic	zipper teeth	B
E	ivory plastic	button	B

Analyte	As	Ba	Cd	Cr	Hg	Sb	Se	
Maximum Limit (mg/kg)	25	1000	75	60	60	60	500	
Analytical Correction	60%	30%	30%	30%	50%	60%	60%	

Analyte	As	Ba	Cd	Cr	Hg	Sb	Se	Mass of Trace Amount	
Sample	Result (mg/kg)							(g)	Conclusion
A	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
B	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
C	LT 2	95	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
D	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
E	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass

mg/kg = milligrams per kilogram (ppm=parts per million)
**= Average of duplicate analysis*
ND = Not detected
LT = Less Than

As = Arsenic, Ba = Barium, Cd = Cadmium, Cr = Chromium, Hg = Mercury, Sb = Antimony, Se = Selenium
Detection limit (mg/kg): Each element 2

RESULTS:

TOTAL LEAD CONTENT IN SURFACE COATING (Canada Consumer Product Safety Act - Consumer Products Containing Lead (Contact with Mouth) Regulations SOR/2010-273 with Amendment in SOR/2016-171)

Classification: Products intended for use in play or learning for children under 3 years

Analyte	Lead	
Requirement: Maximum allowable limit:	90 mg/kg	

Analyte				Lead (Pb)	Conclusion
Sample Description				Result (mg/kg)	
Color / Component		Location	Style		
(A)	Clear coating	Board	A-C	LT 10	PASS
(B)	Bright orange coating	Pattern	A-C	LT 10	PASS
(C)	Green coating	Pattern	A-C	LT 10	PASS
(D)	Blue coating	Pattern	A-C	LT 10	PASS
(E)	Red coating	Button	B	LT 10	PASS

LT = Less Than
** = Average of duplicate analyses*
mg/kg =milligrams per kilogram (ppm=parts per million)
ND=Not detected

RESULTS:

TOTAL LEAD CONTENT IN SUBSTRATE (Canada Consumer Product Safety Act - Consumer Products Containing Lead (Contact with Mouth) Regulations SOR/2010-273 with Amendment in SOR/2016-171)

Classification: Products intended for use in play or learning for children under 3 years

Analyte	Lead	
Requirement: Maximum allowable limit:	90 mg/kg	

Analyte				Lead (Pb)	Conclusion
Sample Description				Result (mg/kg)	
	Color / Component	Location	Style		
(F)	black plastic white soft plastic	buckle elastic band	A A	LT 10	Pass
(G)	translucent plastic	zipper teeth	B	LT 10	Pass
(H)	white plastic	button	B	LT 10	Pass
(I)	flesh plastic	screw	A,B	LT 10	Pass
(J)	bright silvery metal	body of hook	A	LT 10	Pass
(K)	light silvery metal	arm of hook	A	LT 10	Pass
(L)	matt silvery metal	bolt of hook	A	LT 10	Pass
(M)	flat silvery metal	nut of hook	A	LT 10	Pass
(N)	soft silvery metal	lock	A	LT 10	Pass
(O)	sharp silvery metal	loop of lock	A	LT 10	Pass
(P)	dark silvery metal	plate back of lock	A	57	Pass
(Q)	dull silvery metal	zipper slider	B	26	Pass
(R)	deep silvery metal	zipper puller	B	34	Pass
(S)	pale silvery metal	cap of famale snap	B	LT 10	Pass
(T)	bright pale silvery metal	famale snap	B	LT 10	Pass
(U)	light pale silvery metal	wire inner famale snap	B	LT 10	Pass
(V)	matt pale silvery metal	male snap	B	LT 10	Pass
(W)	flat pale silvery metal	back of male snap	B	LT 10	Pass
(X)	silvery metal	screw on back of wooden board	A,B	LT 10	Pass
(Y)	ivory plastic	button	B	LT 10	Pass
(Z)	Bright flesh wood	Wood board	A,B	LT 10	Pass

LT = Less Than
** = Average of duplicate analyses*
mg/kg =milligrams per kilogram (ppm=parts per million)
ND=Not detected

RESULTS:

AROMATIC AMINES (AZOCOLOURANTS) CONTENT (European Regulation (EC) No. 1907/2006 REACH, Annex XVII, Item no. 43, Points 1 and 2)

Test Method: Quantification by Gas Chromatography/Mass Spectrometry (GC/MS)
Additional chromatographic technique employed to confirm positive result by HPLC/TLC

Sample ID	Color / Component	Location	Style
A.	Composite of		
	red felt	pocket	A,B
	orange felt	pocket	A
	blue felt	pocket	A,B
B.	green felt	pocket	A,B
	yellow felt	pocket	A,B
	purple felt	pocket	A,B
C.	yellow strap	belt	A
	red strap	belt of keys	C
D.	blue wide ribbon	belt	A
	soft blue narrow ribbon	belt	A
E.	red ribbon	belt	A
	violet felt	pocket	B

RESULTS:

AROMATIC AMINES (AZOCOLOURANTS) CONTENT (European Regulation (EC) No. 1907/2006 REACH, Annex XVII, Item no. 43, Points 1 and 2)

Test Method: Quantification by Gas Chromatography/Mass Spectrometry (GC/MS)
Additional chromatographic technique employed to confirm positive result by HPLC/TLC

Test Parameter:		Aromatic Amines (Azocolourants)		
Requirement:		30 mg/kg		
Sample ID	Test Method	Detected Amine Number	Concentration (mg/kg (ppm))	Conclusion
A.	I + II	-	LT 10	Pass
B.	I + II	-	LT 10	Pass
C.	I + II	-	LT 10	Pass
D.	I + II	-	LT 10	Pass
E.	I + II	-	LT 10	Pass

ND = Not Detected (Detection Limit = 10 mg/kg (ppm)) *ppm = parts per million*
mg/kg = milligrams per kilogram *NR = Not Requested*
** = The specimen is a minor component. As only a reduced mass (< 0.5 g) could be used for the test the result may have a greater uncertainty due to lower material homogeneity*

Amine No. = Refer to List of Banned Amines for the description of the detected Amine.
Test Method I = European Standard EN 14362-1: 2017, Clauses 9, 10.2 and afterwards.
Test Method II = European Standard EN 14362-1: 2017, Clauses 9, 10.1, 10.3 and afterwards.
Test Method III = International Standard ISO 17234-1: 2015.

Remark:
The list of aromatic amines in azo colorants is summarized in table of Appendix.
The CAS-number 97-56-3 (no. 5) and 99-55-8 (no. 6) are further reduced to CAS-number 95-53-4 (no. 18) and 95-80-7 (no. 19), respectively.
The colorant(s) of Test Item(s), that are able to form 4-aminoazobenzene, is (are) able to generate aniline and 1,4-phenylenediamine under the condition of Test Method.
The absence of 4-aminoazobenzene is inferred by the absence of aniline and 1,4-phenylenediamine under the condition of Test Method.

RESULTS:

LIST OF BANNED AMINES Specified Amines		
Number	Chemical Name	CAS Number
1.	4-aminobiphenyl	92-67-1
2.	Benzidine	92-87-5
3.	4-chloro-o-toluidine	95-69-2
4.	2-naphthylamine	91-59-8
5.	o-aminoazotoluene	97-56-3
6.	5-nitro-o-toluidine	99-55-8
7.	4-chloroaniline	106-47-8
8.	4-methoxy-m-phenylenediamine	615-05-4
9.	4,4'-diaminodiphenylmethane	101-77-9
10.	3,3'-dichlorobenzidine	91-94-1
11.	3,3'-dimethoxybenzidine	119-90-4
12.	3,3'-dimethylbenzidine	119-93-7
13.	4,4'-methylenedi-o-toluidine	838-88-0
14.	p-cresidine	120-71-8
15.	4,4'-methylene-bis-(2-chloro-aniline)	101-14-4
16.	4,4'-oxydianiline	101-80-4
17.	4,4'-thiodianiline	139-65-1
18.	o-toluidine	95-53-4
19.	4-methyl-m-phenylenediamine	95-80-7
20.	2,4,5-trimethylaniline	137-17-7
21.	o-anisidine	90-04-0
22.	4-amino azobenzene	60-09-3

RESULTS:

MIGRATION OF CERTAIN ELEMENTS (European Standard EN 71 Part 3: 2013+A2:2017)

Test Method : European Standard EN 71 Part 3: 2013+A2:2017, Annex E.

Class: Category III - Scraped off toy material

Sample Identity	Color	Location	Style
A.	flesh plastic	screw	A-C
B.	black plastic	buckle	A
C.	white soft plastic	elastic band	A
D.	translucent plastic	zipper teeth	B
E.	ivory plastic	button	B
F.	soft white plastic	inner door	C
G.	soft light silvery metal	keys	C
H.	bright light silvery metal	key ring	C
I.	white fabric	elastic band	A
J.	red thread/ red felt	pocket	A,B
K.	orange thread/ orange felt	pocket	A
L.	blue thread/ blue felt	pocket	A,B
M.	green thread/ green felt	pocket	A,B
N.	yellow thread/ yellow felt	pocket	A,B
O.	purple thread/ purple felt	pocket	A,B
P.	bright red felt	pocket	A,B
Q.	bright purple felt	pocket	A,B
R.	yellow strap	belt	A
S.	blue wide ribbon/ deep blue thread	belt	A
T.	soft blue narrow ribbon	belt	A
U.	red ribbon	belt	A
V.	yellow hook and loop fastener	fastener	A
W.	violet thread/ violet felt	pocket	B
X.	grey fabric	zipper band	B
Y.	red strap	belt of keys	C
Z.	Clear coating	Board	A-C

RESULTS:

MIGRATION OF CERTAIN ELEMENTS (European Standard EN 71 Part 3: 2013+A2:2017)

Test Method : European Standard EN 71 Part 3: 2013+A2:2017, Annex E.

Class: Category III - Scraped off toy material

Sample Identity	Color	Location	Style
AA.	light brown wood	Inner red door	C
AB.	Bright orange coating	Pattern	A-C
AC.	Deep orange coating	Pattern	C
AD.	Green coating	Pattern	A-C
AE.	Aqua green coating	Pattern	C
AF.	Blue coating	Pattern	A-C
AG.	Aqua blue coating	Pattern	C
AH.	Red coating	Button	B
AI.	White coating	Pattern	C

RESULTS:

MIGRATION OF CERTAIN ELEMENTS (European Standard EN 71 Part 3: 2013+A2:2017)

Test Method : European Standard EN 71 Part 3: 2013+A2:2017, Annex E.

Class: Category III - Scraped off toy material

Analyte	Requirement (mg/kg)	Result (mg/kg)					
		Sample ID					
	Category III	A.	B.	C.	D.	E.	F.
Aluminium (Al)	70000	3	6	7	2	2	100
Arsenic (As)	47	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Boron (B)	15000	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Barium (Ba)	18750	LT 2	LT 2	95	LT 2	LT 2	LT 2
Cadmium (Cd)	17	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Cobalt (Co)	130	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Chromium III (Cr III)	460	LT 0.15	0.18	LT 0.15	LT 0.15	LT 0.15	LT 0.15
Chromium VI (Cr VI)	0.2						
Copper (Cu)	7700	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Mercury (Hg)	94	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Manganese (Mn)	15000	LT 2	LT 2	LT 2	LT 2	LT 2	5
Nickel (Ni)	930	2	LT 2	LT 2	LT 2	LT 2	LT 2
Lead (Pb)	160	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Antimony (Sb)	560	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Selenium (Se)	460	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Tin (Sn)	180000	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Organic tin	12	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Strontium (Sr)	56000	LT 2	LT 2	LT 2	LT 2	LT 2	6
Zinc (Zn)	46000	10	3	730	LT 2	3	4
Mass of trace amount (gram)		-	-	-	-	-	-
Conclusion		Pass	Pass	Pass	Pass	Pass	Pass

RESULTS:

MIGRATION OF CERTAIN ELEMENTS (European Standard EN 71 Part 3: 2013+A2:2017)

Test Method : European Standard EN 71 Part 3: 2013+A2:2017, Annex E.

Class: Category III - Scraped off toy material

Analyte	Requirement (mg/kg)	Result (mg/kg)					
		Sample ID					
	Category III	G.	H.	I.	J.	K.	L.
Aluminium (Al)	70000	LT 2	LT 2	5	LT 2	3	LT 2
Arsenic (As)	47	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Boron (B)	15000	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Barium (Ba)	18750	LT 2	LT 2	14	LT 2	LT 2	LT 2
Cadmium (Cd)	17	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Cobalt (Co)	130	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Chromium III (Cr III)	460	LT 0.15	LT 0.15	LT 0.15	LT 0.15	LT 0.15	LT 0.15
Chromium VI (Cr VI)	0.2						
Copper (Cu)	7700	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Mercury (Hg)	94	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Manganese (Mn)	15000	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Nickel (Ni)	930	2	5	LT 2	LT 2	LT 2	LT 2
Lead (Pb)	160	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Antimony (Sb)	560	LT 2	LT 2	LT 2	6	32	3
Selenium (Se)	460	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Tin (Sn)	180000	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Organic tin	12	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Strontium (Sr)	56000	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Zinc (Zn)	46000	LT 2	LT 2	150	3	2	LT 2
Mass of trace amount (gram)		-	-	-	-	-	-
Conclusion		Pass	Pass	Pass	Pass	Pass	Pass

RESULTS:

MIGRATION OF CERTAIN ELEMENTS (European Standard EN 71 Part 3: 2013+A2:2017)

Test Method : European Standard EN 71 Part 3: 2013+A2:2017, Annex E.

Class: Category III - Scraped off toy material

Analyte	Requirement (mg/kg)	Result (mg/kg)					
		Sample ID					
	Category III	M.	N.	O.	P.	Q.	R.
Aluminium (Al)	70000	9	LT 2	3	LT 2	2	4
Arsenic (As)	47	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Boron (B)	15000	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Barium (Ba)	18750	LT 2	LT 2	3	LT 2	LT 2	LT 2
Cadmium (Cd)	17	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Cobalt (Co)	130	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Chromium III (Cr III)	460	0.22	LT 0.15	LT 0.15	LT 0.15	LT 0.15	LT 0.15
Chromium VI (Cr VI)	0.2	#LT 0.002					
Copper (Cu)	7700	3	LT 2	LT 2	LT 2	LT 2	LT 2
Mercury (Hg)	94	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Manganese (Mn)	15000	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Nickel (Ni)	930	15	LT 2	LT 2	LT 2	LT 2	LT 2
Lead (Pb)	160	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Antimony (Sb)	560	LT 2	LT 2	4	7	5	LT 2
Selenium (Se)	460	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Tin (Sn)	180000	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Organic tin	12	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Strontium (Sr)	56000	LT 2	LT 2	LT 2	LT 2	LT 2	2
Zinc (Zn)	46000	14	2	6	3	2	4
Mass of trace amount (gram)		-	-	-	-	-	-
Conclusion		Pass	Pass	Pass	Pass	Pass	Pass

RESULTS:

MIGRATION OF CERTAIN ELEMENTS (European Standard EN 71 Part 3: 2013+A2:2017)

Test Method : European Standard EN 71 Part 3: 2013+A2:2017, Annex E.

Class: Category III - Scraped off toy material

Analyte	Requirement (mg/kg)	Result (mg/kg)					
		Sample ID					
	Category III	S.	T.	U.	V.	W.	X.
Aluminium (Al)	70000	6	5	3	7	4	6
Arsenic (As)	47	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Boron (B)	15000	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Barium (Ba)	18750	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Cadmium (Cd)	17	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Cobalt (Co)	130	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Chromium III (Cr III)	460	LT 0.15	LT 0.15	LT 0.15	LT 0.15	LT 0.15	LT 0.15
Chromium VI (Cr VI)	0.2						
Copper (Cu)	7700	LT 2	LT 2	LT 2	LT 2	2	2
Mercury (Hg)	94	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Manganese (Mn)	15000	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Nickel (Ni)	930	2	LT 2	LT 2	LT 2	LT 2	LT 2
Lead (Pb)	160	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Antimony (Sb)	560	LT 2	LT 2	LT 2	LT 2	7	LT 2
Selenium (Se)	460	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Tin (Sn)	180000	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Organic tin	12	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Strontium (Sr)	56000	LT 2	LT 2	LT 2	16	LT 2	21
Zinc (Zn)	46000	3	2	10	LT 2	4	6
Mass of trace amount (gram)		-	-	-	-	-	-
Conclusion		Pass	Pass	Pass	Pass	Pass	Pass

RESULTS:

MIGRATION OF CERTAIN ELEMENTS (European Standard EN 71 Part 3: 2013+A2:2017)

Test Method : European Standard EN 71 Part 3: 2013+A2:2017, Annex E.

Class: Category III - Scraped off toy material

Analyte	Requirement (mg/kg)	Result (mg/kg)					
		Sample ID					
	Category III	Y.	Z.	AA.	AB.	AC.	AD.
Aluminium (Al)	70000	6	LT 2	10	6	6	4
Arsenic (As)	47	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Boron (B)	15000	LT 2	LT 2	2	LT 2	LT 2	LT 2
Barium (Ba)	18750	11	LT 2	6	LT 2	LT 2	LT 2
Cadmium (Cd)	17	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Cobalt (Co)	130	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Chromium III (Cr III)	460	0.28	LT 0.15	LT 0.15	LT 0.15	LT 0.15	LT 0.15
Chromium VI (Cr VI)	0.2	#LT 0.002					
Copper (Cu)	7700	16	LT 2	LT 2	LT 2	LT 2	LT 2
Mercury (Hg)	94	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Manganese (Mn)	15000	LT 2	LT 2	87	LT 2	LT 2	LT 2
Nickel (Ni)	930	42	LT 2	LT 2	LT 2	LT 2	LT 2
Lead (Pb)	160	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Antimony (Sb)	560	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Selenium (Se)	460	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Tin (Sn)	180000	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Organic tin	12	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2
Strontium (Sr)	56000	8	LT 2	5	LT 2	LT 2	LT 2
Zinc (Zn)	46000	16	520	6	280	390	160
Mass of trace amount (gram)		-	0.0503	-	-	-	-
Conclusion		Pass	Pass	Pass	Pass	Pass	Pass

RESULTS:

MIGRATION OF CERTAIN ELEMENTS (European Standard EN 71 Part 3: 2013+A2:2017)

Test Method : European Standard EN 71 Part 3: 2013+A2:2017, Annex E.

Class: Category III - Scraped off toy material

Analyte	Requirement (mg/kg)	Result (mg/kg)					
		Sample ID					
	Category III	AE.	AF.	AG.	AH.	AI.	-
Aluminium (Al)	70000	14	3	10	26	8	-
Arsenic (As)	47	LT 2	LT 2	LT 2	LT 2	LT 2	-
Boron (B)	15000	LT 2	LT 2	LT 2	LT 2	LT 2	-
Barium (Ba)	18750	LT 2	LT 2	LT 2	3	LT 2	-
Cadmium (Cd)	17	LT 2	LT 2	LT 2	LT 2	LT 2	-
Cobalt (Co)	130	LT 2	LT 2	LT 2	LT 2	LT 2	-
Chromium III (Cr III)	460	LT 0.15	LT 0.15	LT 0.15	LT 0.15	LT 0.15	-
Chromium VI (Cr VI)	0.2						
Copper (Cu)	7700	LT 2	LT 2	LT 2	LT 2	LT 2	-
Mercury (Hg)	94	LT 2	LT 2	LT 2	LT 2	LT 2	-
Manganese (Mn)	15000	LT 2	LT 2	LT 2	LT 2	LT 2	-
Nickel (Ni)	930	LT 2	LT 2	LT 2	LT 2	LT 2	-
Lead (Pb)	160	LT 2	LT 2	LT 2	LT 2	LT 2	-
Antimony (Sb)	560	LT 2	LT 2	LT 2	LT 2	LT 2	-
Selenium (Se)	460	LT 2	LT 2	LT 2	LT 2	LT 2	-
Tin (Sn)	180000	LT 2	LT 2	LT 2	LT 2	LT 2	-
Organic tin	12	LT 2	LT 2	LT 2	LT 2	LT 2	-
Strontium (Sr)	56000	LT 2	LT 2	LT 2	LT 2	LT 2	-
Zinc (Zn)	46000	200	160	420	180	88	-
Mass of trace amount (gram)		-	-	-	-	-	-
Conclusion		Pass	Pass	Pass	Pass	Pass	-

mg/kg = milligrams per kilogram (ppm=parts per million) *LT = Less Than*
** = Average of duplicate analysis* *FR = Failed Result*
Organic tin = migration of total organic tin is expressed as tributyl tin cation content in mg/kg
 # = Verified results (see note)
Remark:
- Results of Cr III and Cr VI were reported as sum of soluble Chromium content unless specified.
- Result(s) of organic tin was (were) calculated while assuming the tin content wholly contributed from tributyltin cation unless specified.

Note:
If soluble chromium content or soluble tin content exceeded the screening limits of soluble chromium (VI) or organic tin content, the results were verified by below method
- Chromium VI: In house Ion-chromatography analysis
- Organic tin: EN71 part 3:2013+A2:2017, Annex G by Gas Chromatography – Mass Spectroscopy analysis.

RESULTS:

CADMIUM CONTENT (European Regulation (EC) No. 1907/2006 REACH Annex XVII, Item no. 23)

Category:				Plastics			
Element:				Cadmium			
Test Method				BS EN 1122: 2001, Method B			
Maximum Allowable Limit:				100 mg/kg (0.01% by weight)			
Sample Description				Reading 1	Reading 2	Average	Conclusion
Color / Component		Location	Style	Result (mg/kg)			
(A)	flesh plastic black plastic white soft plastic	screw buckle elastic band	A-C A A	LT 10	LT 10	LT 10	Pass
(B)	translucent plastic white plastic	zipper teeth button	B B	LT 10	LT 10	LT 10	Pass
(C)	soft white plastic off white plastic yellow hook and loop fastener Dull white plastic	inner door inner coded lock of red door fastener inner coded lock of red door	C C A C				
(D)	ivory plastic	button	B	LT 10	LT 10	LT 10	Pass

LT = Less than *mg/kg = milligrams per kilogram (ppm = parts per million)*
 # = Insufficient sample for duplicate analyses *Operator: Tsui Chi Piu, Cyrus*

RESULTS:

CADMIUM CONTENT (European Regulation (EC) No. 1907/2006 REACH Annex XVII, Item no. 23)

Category:				Paints	
Element:				Cadmium	
Test Method:				In house acid digestion	
Maximum Allowable Limit:				100 mg/kg (0.1% by weight)	
Test Component				Result (mg/kg)	Conclusion
Colour/Component		Location	Style		
(A)	Clear coating	Board	A-C	LT 10	Pass
(B)	Bright orange coating	Pattern	A-C	LT 10	Pass
(C)	Deep orange coating	Pattern	C	LT 10	Pass
(D)	Green coating	Pattern	A-C	LT 10	Pass
(E)	Aqua green coating	Pattern	C	LT 10	Pass
(F)	Blue coating	Pattern	A-C	LT 10	Pass
(G)	Aqua blue coating	Pattern	C	LT 10	Pass
(H)	Red coating	Button	B	LT 10	Pass
(I)	White coating	Pattern	C	LT 10	Pass

LT = Less than *mg/kg = milligrams per kilogram (ppm = parts per million)*
** = Average of duplicate analyses*

RESULTS:

MIGRATION OF CERTAIN ELEMENTS (AS/NZS ISO 8124 Part 3: 2012)

Test Method: Soluble heavy metals content analysis was determined by Inductively Coupled Plasma Spectrometry.

Sample Identity	Color / Component	Location	Style
Type II: Polymeric Materials			
A.	flesh plastic	screw	A-C
B.	black plastic	buckle	A
C.	white soft plastic	elastic band	A
D.	translucent plastic	zipper teeth	B
E.	ivory plastic	button	B
F.	soft white plastic	inner door	C
Type V: Glass / Ceramic / Metallic Materials			
G.	soft light silvery metal	keys	C
H.	bright light silvery metal	key ring	C
Type IV: Textiles			
I.	white fabric	elastic band	A
J.	red thread/ red felt	pocket	A,B
K.	orange thread/ orange felt	pocket	A
L.	blue thread/ blue felt	pocket	A,B
M.	green thread/ green felt	pocket	A,B
N.	yellow thread/ yellow felt	pocket	A,B
O.	purple thread/ purple felt	pocket	A,B
P.	bright red felt	pocket	A,B
Q.	bright purple felt	pocket	A,B
R.	yellow strap	belt	A
S.	blue wide ribbon/ deep blue thread	belt	A
T.	soft blue narrow ribbon	belt	A
U.	red ribbon	belt	A
V.	yellow hook and loop fastener	fastener	A
W.	violet thread/ violet felt	pocket	B
X.	grey fabric	zipper band	B
Y.	red strap	belt of keys	C

RESULTS:

MIGRATION OF CERTAIN ELEMENTS (AS/NZS ISO 8124 Part 3: 2012)

Test Method: Soluble heavy metals content analysis was determined by Inductively Coupled Plasma Spectrometry.

Sample Identity	Color / Component	Location	Style
Type I: Coatings			
Z.	Clear coating	Board	A-C
AA.	Bright orange coating	Pattern	A-C
AB.	Deep orange coating	Pattern	C
AC.	Green coating	Pattern	A-C
AD.	Aqua green coating	Pattern	C
AE.	Blue coating	Pattern	A-C
AF.	Aqua blue coating	Pattern	C
AG.	Red coating	Button	B
AH.	White coating	Pattern	C

RESULTS:

MIGRATION OF CERTAIN ELEMENTS (AS/NZS ISO 8124 Part 3: 2012)

Test Method: Soluble heavy metals content analysis was determined by Inductively Coupled Plasma Spectrometry.

Analyte	As	Ba	Cd	Cr	Hg	Pb	Sb	Se
Max. Limit All except Type VIII (mg/kg)	25	1000	75	60	60	90	60	500
Max. Limit Type VIII (mg/kg)	25	250	50	25	25	90	60	500
Analytical Correction	60%	30%	30%	30%	50%	30%	60%	60%

Analyte	As	Ba	Cd	Cr	Hg	Pb	Sb	Se	Mass of Trace Amount	Conclusion
Sample	Result (mg/kg)								(g)	
A.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
B.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
C.	LT 2	95	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
D.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
E.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
F.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
G.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
H.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
I.	LT 2	14	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
J.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	6	LT 2	-	Pass
K.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	32	LT 2	-	Pass
L.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	3	LT 2	-	Pass
M.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
N.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
O.	LT 2	3	LT 2	LT 2	LT 2	LT 2	4	LT 2	-	Pass

RESULTS:

MIGRATION OF CERTAIN ELEMENTS (AS/NZS ISO 8124 Part 3: 2012)

Test Method: Soluble heavy metals content analysis was determined by Inductively Coupled Plasma Spectrometry.

Analyte	As	Ba	Cd	Cr	Hg	Pb	Sb	Se
Max. Limit All except Type VIII (mg/kg)	25	1000	75	60	60	90	60	500
Max. Limit Type VIII (mg/kg)	25	250	50	25	25	90	60	500
Analytical Correction	60%	30%	30%	30%	50%	30%	60%	60%

Analyte	As	Ba	Cd	Cr	Hg	Pb	Sb	Se	Mass of Trace Amount	Conclusion
Sample	Result (mg/kg)								(g)	
P.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	7	LT 2	-	Pass
Q.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	5	LT 2	-	Pass
R.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
S.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
T.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
U.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
V.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
W.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	7	LT 2	-	Pass
X.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
Y.	LT 2	11	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
Z.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	0.0503	Pass
AA.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
AB.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
AC.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
AD.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass

RESULTS:

MIGRATION OF CERTAIN ELEMENTS (AS/NZS ISO 8124 Part 3: 2012)

Test Method: Soluble heavy metals content analysis was determined by Inductively Coupled Plasma Spectrometry.

Analyte	As	Ba	Cd	Cr	Hg	Pb	Sb	Se
Max. Limit All except Type VIII (mg/kg)	25	1000	75	60	60	90	60	500
Max. Limit Type VIII (mg/kg)	25	250	50	25	25	90	60	500
Analytical Correction	60%	30%	30%	30%	50%	30%	60%	60%

Analyte	As	Ba	Cd	Cr	Hg	Pb	Sb	Se	Mass of Trace Amount	Conclusion
Sample	Result (mg/kg)								(g)	
AE.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
AF.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
AG.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
AH.	LT 2	3	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass

mg/kg = milligrams per kilogram (ppm=parts per million)
CR = adjusted analytical result
LT = Less Than
** = Average of duplicate analysis*

As = Arsenic, Ba = Barium, Cd = Cadmium,
Cr = Chromium, Hg = Mercury, Pb = Lead,
Sb = Antimony, Se = Selenium

RESULTS:

MIGRATION OF CERTAIN ELEMENTS (AS/NZS 8124 Part 3: 2012 with Amendment No. 1: 2016)

Test Method: Soluble heavy metals content analysis was determined by Inductively Coupled Plasma Spectrometry.

Sample Identity	Color / Component	Location	Style
Type II: Polymeric Materials			
A.	flesh plastic	screw	A-C
B.	black plastic	buckle	A
C.	white soft plastic	elastic band	A
D.	translucent plastic	zipper teeth	B
E.	ivory plastic	button	B
F.	soft white plastic	inner door	C
Type V: Glass / Ceramic / Metallic Materials			
G.	soft light silvery metal	keys	C
H.	bright light silvery metal	key ring	C
Type IV: Textiles			
I.	white fabric	elastic band	A
J.	red thread/ red felt	pocket	A,B
K.	orange thread/ orange felt	pocket	A
L.	blue thread/ blue felt	pocket	A,B
M.	green thread/ green felt	pocket	A,B
N.	yellow thread/ yellow felt	pocket	A,B
O.	purple thread/ purple felt	pocket	A,B
P.	bright red felt	pocket	A,B
Q.	bright purple felt	pocket	A,B
R.	yellow strap	belt	A
S.	blue wide ribbon/ deep blue thread	belt	A
T.	soft blue narrow ribbon	belt	A
U.	red ribbon	belt	A
V.	yellow hook and loop fastener	fastener	A
W.	violet thread/ violet felt	pocket	B
X.	grey fabric	zipper band	B
Y.	red strap	belt of keys	C

RESULTS:

MIGRATION OF CERTAIN ELEMENTS (AS/NZS 8124 Part 3: 2012 with Amendment No. 1: 2016)

Test Method: Soluble heavy metals content analysis was determined by Inductively Coupled Plasma Spectrometry.

Sample Identity	Color / Component	Location	Style
Type I: Coatings			
Z.	Clear coating	Board	A-C
AA.	Bright orange coating	Pattern	A-C
AB.	Deep orange coating	Pattern	C
AC.	Green coating	Pattern	A-C
AD.	Aqua green coating	Pattern	C
AE.	Blue coating	Pattern	A-C
AF.	Aqua blue coating	Pattern	C
AG.	Red coating	Button	B
AH.	White coating	Pattern	C

RESULTS:

MIGRATION OF CERTAIN ELEMENTS (AS/NZS 8124 Part 3: 2012 with Amendment No. 1: 2016)

Test Method: Soluble heavy metals content analysis was determined by Inductively Coupled Plasma Spectrometry.

Analyte	As	Ba	Cd	Cr	Hg	Pb	Sb	Se
Max. Limit All except Type VIII (mg/kg)	25	1000	75	60	60	90	60	500
Max. Limit Type VIII (mg/kg)	25	250	50	25	25	90	60	500
Analytical Correction	60%	30%	30%	30%	50%	30%	60%	60%

Analyte	As	Ba	Cd	Cr	Hg	Pb	Sb	Se	Mass of Trace Amount	Conclusion
Sample	Result (mg/kg)								(g)	
A.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
B.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
C.	LT 2	95	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
D.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
E.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
F.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
G.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
H.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
I.	LT 2	14	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
J.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	6	LT 2	-	Pass
K.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	32	LT 2	-	Pass
L.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	3	LT 2	-	Pass
M.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
N.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
O.	LT 2	3	LT 2	LT 2	LT 2	LT 2	4	LT 2	-	Pass

RESULTS:

MIGRATION OF CERTAIN ELEMENTS (AS/NZS 8124 Part 3: 2012 with Amendment No. 1: 2016)

Test Method: Soluble heavy metals content analysis was determined by Inductively Coupled Plasma Spectrometry.

Analyte	As	Ba	Cd	Cr	Hg	Pb	Sb	Se
Max. Limit All except Type VIII (mg/kg)	25	1000	75	60	60	90	60	500
Max. Limit Type VIII (mg/kg)	25	250	50	25	25	90	60	500
Analytical Correction	60%	30%	30%	30%	50%	30%	60%	60%

Analyte	As	Ba	Cd	Cr	Hg	Pb	Sb	Se	Mass of Trace Amount	Conclusion
Sample	Result (mg/kg)								(g)	
P.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	7	LT 2	-	Pass
Q.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	5	LT 2	-	Pass
R.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
S.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
T.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
U.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
V.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
W.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	7	LT 2	-	Pass
X.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
Y.	LT 2	11	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
Z.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	0.0503	Pass
AA.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
AB.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
AC.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
AD.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass

RESULTS:

MIGRATION OF CERTAIN ELEMENTS (AS/NZS 8124 Part 3: 2012 with Amendment No. 1: 2016)

Test Method: Soluble heavy metals content analysis was determined by Inductively Coupled Plasma Spectrometry.

Analyte	As	Ba	Cd	Cr	Hg	Pb	Sb	Se
Max. Limit All except Type VIII (mg/kg)	25	1000	75	60	60	90	60	500
Max. Limit Type VIII (mg/kg)	25	250	50	25	25	90	60	500
Analytical Correction	60%	30%	30%	30%	50%	30%	60%	60%

Analyte	As	Ba	Cd	Cr	Hg	Pb	Sb	Se	Mass of Trace Amount	Conclusion
Sample	Result (mg/kg)								(g)	
AE.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
AF.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
AG.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass
AH.	LT 2	3	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	-	Pass

mg/kg = milligrams per kilogram (ppm=parts per million)
CR = adjusted analytical result
LT = Less Than
** = Average of duplicate analysis*

As = Arsenic, Ba = Barium, Cd = Cadmium,
Cr = Chromium, Hg = Mercury, Pb = Lead,
Sb = Antimony, Se = Selenium

RESULTS:

PHTHALATES CONTENT IN CHILDREN`S TOYS AND CHILD CARE ARTICLES (Consumer Product Safety Improvement Act (CPSIA) of 2008, Section 108(a) and 108(c), 16 CFR 1307)

Test Method: With reference to U. S. CPSC-CH-C1001-09.3 (April 1, 2010).

Sample Identity	Color / Component	Location	Style
A.	Flesh plastic	Screw	A-C
	Black plastic	Buckle	A-C
	White soft plastic	Elastic band	A
B.	White plastic	Button	B
C.	Off white plastic	Inner coded lock of red door	C
	Dull white plastic	Inner coded lock of red door	C
D.	Translucent plastic	Zipper teeth	B
E.	Ivory plastic	Button	B
F.	Soft white plastic	Inner door	C
G.	Clear coating	Board	A-C
H.	Bright orange coating	Pattern	A-C
I.	Deep orange coating	Pattern	C
J.	Green coating	Pattern	A-C
K.	Aqua green coating	Pattern	C
L.	Blue coating	Pattern	A-C
M.	Aqua blue coating	Pattern	C
N.	Red coating	Button	B
O.	White coating	Pattern	C

RESULTS:

PHTHALATES CONTENT IN CHILDREN`S TOYS AND CHILD CARE ARTICLES (Consumer Product Safety Improvement Act (CPSIA) of 2008, Section 108(a) and 108(c), 16 CFR 1307)

Test Method: With reference to U. S. CPSC-CH-C1001-09.3 (April 1, 2010).

Test Parameter:	Listed Phthalates (See Remark)		
Requirement:	Each 0.1%		
Sample ID	Detected Analyte	Concentration (%)	Conclusion
A.	ND	ND	Pass
B.	ND	ND	Pass
C.	ND	ND	Pass
D.	ND	ND	Pass
E.	ND	ND	Pass
F.	ND	ND	Pass
G.	ND	ND	Pass
H.	ND	ND	Pass
I.	ND	ND	Pass
J.	ND	ND	Pass
K.	ND	ND	Pass
L.	ND	ND	Pass
M.	ND	ND	Pass
N.	ND	ND	Pass
O.	ND	ND	Pass

Results reported in percentage
ND = None detected
Detection Limit: Each Phthalate (0.005%)

LIST OF RESTRICTED PHTHALATES		
Number	Chemical Name	CAS Number
1.	Butyl benzyl phthalate (BBP)	85-68-7
2.	Dibutyl phthalate (DBP)	84-74-2
3.	Di(2-ethylhexyl) phthalate (DEHP)	117-81-7
4.	Di-iso-nonyl phthalate (DINP)	28553-12-0 & 68515-48-0
5.	Di-iso-butyl phthalate (DIBP)	84-69-5
6.	Di-n-pentyl phthalate (DPENP or DnPP)	131-18-0
7.	Di-n-hexyl phthalate (DHEXP or DnHP)	84-75-3
8.	Dicyclohexyl phthalate (DCHP)	84-61-7

RESULTS:

BBP/DBP/DEHP CONTENTS IN TOYS AND CHILDCARE ARTICLES (European Regulation (EC) No. 1907/2006 REACH Annex XVII, Item no. 51)

Test Method: Sample was extracted with organic solvent and then analyzed by Liquid Chromatograph Mass Spectrometer / Gas Chromatograph Mass Spectrometer.

Sample Identity	Test Component	Location	Style
A.	Flesh plastic	Screw	A-C
	Black plastic	Buckle	A-C
	White soft plastic	Elastic band	A
B.	White plastic	Button	B
C.	Off white plastic	Inner coded lock of red door	C
	Dull white plastic	Inner coded lock of red door	C
D.	Translucent plastic	Zipper teeth	B
E.	Ivory plastic	Button	B
F.	Soft white plastic	Inner door	C
G.	Clear coating	Board	A-C
H.	Bright orange coating	Pattern	A-C
I.	Deep orange coating	Pattern	C
J.	Green coating	Pattern	A-C
K.	Aqua green coating	Pattern	C
L.	Blue coating	Pattern	A-C
M.	Aqua blue coating	Pattern	C
N.	Red coating	Button	B
O.	White coating	Pattern	C

RESULTS:

BBP/DBP/DEHP CONTENTS IN TOYS AND CHILDCARE ARTICLES (European Regulation (EC) No. 1907/2006 REACH Annex XVII, Item no. 51)

Test Method: Sample was extracted with organic solvent and then analyzed by Liquid Chromatograph Mass Spectrometer / Gas Chromatograph Mass Spectrometer.

Test Parameter:	BBP	DBP	DEHP	Sum of three phthalates	
Limit (%):	0.1	0.1	0.1	0.1	
Sample	Result (%)				Conclusion
A.	LT 0.005	LT 0.005	LT 0.005	LT 0.015	Pass
B.	LT 0.005	LT 0.005	LT 0.005	LT 0.015	Pass
C.	LT 0.005	LT 0.005	LT 0.005	LT 0.015	Pass
D.	LT 0.005	LT 0.005	LT 0.005	LT 0.015	Pass
E.	LT 0.005	LT 0.005	LT 0.005	LT 0.015	Pass
F.	LT 0.005	LT 0.005	LT 0.005	LT 0.015	Pass
G.	LT 0.005	LT 0.005	LT 0.005	LT 0.015	Pass
H.	LT 0.005	LT 0.005	LT 0.005	LT 0.015	Pass
I.	LT 0.005	LT 0.005	LT 0.005	LT 0.015	Pass
J.	LT 0.005	LT 0.005	LT 0.005	LT 0.015	Pass
K.	LT 0.005	LT 0.005	LT 0.005	LT 0.015	Pass
L.	LT 0.005	LT 0.005	LT 0.005	LT 0.015	Pass
M.	LT 0.005	LT 0.005	LT 0.005	LT 0.015	Pass
N.	LT 0.005	LT 0.005	LT 0.005	LT 0.015	Pass
O.	LT 0.005	LT 0.005	LT 0.005	LT 0.015	Pass

Detection Limit :
BBP = Butyl benzyl phthalate (0.005%)
DBP = Dibutyl phthalate (0.005%)
DEHP = Di(2-ethylhexyl) phthalate (0.005%)

Results reported in percentage
LT = Less than
ND = None detected

RESULTS:

DNOP/DINP/DIDP CONTENTS IN TOYS AND CHILDCARE ARTICLES WHICH CAN BE PLACED IN MOUTH BY THE CHILDREN (European Regulation (EC) No. 1907/2006 REACH Annex XVII, Item no. 52)

Test Method: Sample was extracted with organic solvent and then analyzed by Liquid Chromatograph Mass Spectrometer / Gas Chromatograph Mass Spectrometer.

Sample Identity	Test Component	Location	Style
A.	Flesh plastic	Screw	A-C
	Black plastic	Buckle	A-C
	White soft plastic	Elastic band	A
B.	White plastic	Button	B
C.	Off white plastic	Inner coded lock of red door	C
	Dull white plastic	Inner coded lock of red door	C
D.	Translucent plastic	Zipper teeth	B
E.	Ivory plastic	Button	B
F.	Soft white plastic	Inner door	C
G.	Clear coating	Board	A-C
H.	Bright orange coating	Pattern	A-C
I.	Deep orange coating	Pattern	C
J.	Green coating	Pattern	A-C
K.	Aqua green coating	Pattern	C
L.	Blue coating	Pattern	A-C
M.	Aqua blue coating	Pattern	C
N.	Red coating	Button	B
O.	White coating	Pattern	C

RESULTS:

DNOP/DINP/DIDP CONTENTS IN TOYS AND CHILDCARE ARTICLES WHICH CAN BE PLACED IN MOUTH BY THE CHILDREN (European Regulation (EC) No. 1907/2006 REACH Annex XVII, Item no. 52)

Test Method: Sample was extracted with organic solvent and then analyzed by Liquid Chromatograph Mass Spectrometer / Gas Chromatograph Mass Spectrometer.

Test Parameter:	DNOP	DINP	DIDP	Sum of three phthalates	
Limit (%):	0.1	0.1	0.1	0.1	
Sample	Result (%)				Conclusion
A.	LT 0.005	LT 0.005	LT 0.005	LT 0.015	Pass
B.	LT 0.005	LT 0.005	LT 0.005	LT 0.015	Pass
C.	LT 0.005	LT 0.005	LT 0.005	LT 0.015	Pass
D.	LT 0.005	LT 0.005	LT 0.005	LT 0.015	Pass
E.	LT 0.005	LT 0.005	LT 0.005	LT 0.015	Pass
F.	LT 0.005	LT 0.005	LT 0.005	LT 0.015	Pass
G.	LT 0.005	LT 0.005	LT 0.005	LT 0.015	Pass
H.	LT 0.005	LT 0.005	LT 0.005	LT 0.015	Pass
I.	LT 0.005	LT 0.005	LT 0.005	LT 0.015	Pass
J.	LT 0.005	LT 0.005	LT 0.005	LT 0.015	Pass
K.	LT 0.005	LT 0.005	LT 0.005	LT 0.015	Pass
L.	LT 0.005	LT 0.005	LT 0.005	LT 0.015	Pass
M.	LT 0.005	LT 0.005	LT 0.005	LT 0.015	Pass
N.	LT 0.005	LT 0.005	LT 0.005	LT 0.015	Pass
O.	LT 0.005	LT 0.005	LT 0.005	LT 0.015	Pass

Detection Limit :
DNOP = Di-n-octyl phthalate (0.005%)
DINP = Di-iso-nonyl phthalate (0.005%)
DIDP = Di-iso-decyl phthalate (0.005%)

Results reported in percentage
LT = Less than
ND = None detected

RESULTS:

DIBP CONTENT IN TOYS (2009/48/EC and its amendments, Annex II, Part III, Point 3)

Test Parameter:				DIBP	
Limit (%):				0.3	
Color / Component		Location	Style	Result (%)	Conclusion
A.	Flesh plastic	Screw	A-C	LT 0.005	Pass
	Black plastic	Buckle	A-C		
	White soft plastic	Elastic band	A		
B.	White plastic	Button	B	LT 0.005	Pass
C.	Off white plastic	Inner coded lock of red door	C	LT 0.005	Pass
	Dull white plastic	Inner coded lock of red door	C		
D.	Translucent plastic	Zipper teeth	B	LT 0.005	Pass
E.	Ivory plastic	Button	B	LT 0.005	Pass
F.	Soft white plastic	Inner door	C	LT 0.005	Pass
G.	Clear coating	Board	A-C	LT 0.005	Pass
H.	Bright orange coating	Pattern	A-C	LT 0.005	Pass
I.	Deep orange coating	Pattern	C	LT 0.005	Pass
J.	Green coating	Pattern	A-C	LT 0.005	Pass
K.	Aqua green coating	Pattern	C	LT 0.005	Pass
L.	Blue coating	Pattern	A-C	LT 0.005	Pass
M.	Aqua blue coating	Pattern	C	LT 0.005	Pass
N.	Red coating	Button	B	LT 0.005	Pass
O.	White coating	Pattern	C	LT 0.005	Pass

Remark:
DIBP (CAS No: 84-69-5) = Diisobutyl phthalate

Results reported in percentage
ND = None detected
Detection Limit: Each Phthalate (0.005%)

RESULTS:

CLIENT'S 17 PHTHALATES CONTENT SPECIFICATION

- **BBP/DBP/DEHP/DNOP/DINP/DIDP Content**

	Color / Component	Location	Style
	Composite of		
A.	Flesh plastic	Screw	A-C
	Black plastic	Buckle	A-C
	White soft plastic	Elastic band	A
B.	White plastic	Button	B
C.	Off white plastic	Inner coded lock of red door	C
	Dull white plastic	Inner coded lock of red door	C
D.	Translucent plastic	Zipper teeth	B
E.	Ivory plastic	Button	B
F.	Soft white plastic	Inner door	C
G.	Clear coating	Board	A-C
H.	Bright orange coating	Pattern	A-C
I.	Deep orange coating	Pattern	C
J.	Green coating	Pattern	A-C
K.	Aqua green coating	Pattern	C
L.	Blue coating	Pattern	A-C
M.	Aqua blue coating	Pattern	C
N.	Red coating	Button	B
O.	White coating	Pattern	C

RESULTS:

CLIENT'S 17 PHTHALATES CONTENT SPECIFICATION

- **BBP/DBP/DEHP/DNOP/DINP/DIDP Content**

Test Parameter	BBP	DBP	DEHP	DNOP	DINP	DIDP	
Limit (%)	0.1	0.1	0.1	0.1	0.1	0.1	
Sample	Result (%)						Conclusion
A	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	Pass
B	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	Pass
C	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	Pass
D	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	Pass
E	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	Pass
F	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	Pass
G	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	Pass
H	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	Pass
I	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	Pass
J	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	Pass
K	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	Pass
L	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	Pass
M	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	Pass
N	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	Pass
O	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	Pass

Detection Limit :
DNOP = Di-n-octyl phthalate (0.005%) 117-84-0
DINP p
DIDP = Di-iso-decyl phthalate (0.005%) 26761-40-0 / 68515-49-1
BBP = Butyl benzyl phthalate (0.005%) 85-68-7
DBP = Dibutyl phthalate (0.005%) 84-74-2
DEHP = Di(2-ethylhexyl) phthalate (0.005%) 117-81-7

Results reported in percentage
LT = Less than
ND = None detected

RESULTS:

CLIENT'S 17 PHTHALATES CONTENT SPECIFICATION

- **EC No. 201-559-5 /** *DiBP* **/** *DHNUP* **/** *DIHP* **/** *DMEP* **/** *DIPP* **/** *DnPP* **/** *DPP* **/** *PiPP* **/** *DHP* **/** *1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear* **Content**

Test Parameter	EC No. 201-559-5	DiBP	DHNUP	DIHP	DMEP	DIPP	
Limit (%)	0.1	0.1	0.1	0.1	0.1	0.1	
Sample							Conclusion
A	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	Pass
B	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	Pass
C	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	Pass
D	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	Pass
E	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	Pass
F	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	Pass
G	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	Pass
H	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	Pass
I	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	Pass
J	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	Pass
K	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	Pass
L	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	Pass
M	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	Pass
N	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	Pass
O	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	Pass

RESULTS:

CLIENT'S 17 PHTHALATES CONTENT SPECIFICATION

- **EC No. 201-559-5 /** *DiBP* **/** *DHNUP* **/** *DIHP* **/** *DMEP* **/** *DIPP* **/** *DnPP* **/** *DPP* **/** *PiPP* **/** *DHP* **/** *1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear* **Content**

Test Parameter	DnPP	DPP	PiPP	DHP	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	
Limit (%)	0.1	0.1	0.1	0.1	0.1	
Sample						Conclusion
A	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	Pass
B	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	Pass
C	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	Pass
D	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	Pass
E	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	Pass
F	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	Pass
G	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	Pass
H	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	Pass
I	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	Pass
J	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	Pass
K	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	Pass
L	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	Pass
M	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	Pass
N	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	Pass
O	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	Pass

RESULTS:

CLIENT'S 17 PHTHALATES CONTENT SPECIFICATION

Results reported in percentage
LT = Less than
ND = None detected

Detection Limit:
DiBP = Diisobutylphthalate 84-69-5
DHNUP = 1,2-Benzenedicarboxylic acid,di-C7,11-branched and linear alkyl esters 68515-42-4
DIHP = 1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich 71888-89-6
DMEP = Dimethoxyethyl phthalate 117-82-8
DIPP = Diisopentylphthalate 605-50-5
DnPP = Dipentylphthalate 131-18-0
DPP = 1,2-benzenedicarboxylic acid dipentylester, branched and linear 84777-06-0
PiPP = n-Pentyl-Isopentylphthalate 776297-69-9
DHP = Dihexylphthalate 84-75-3
1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear 68515-50-4
EC No. 201-559-5 = 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

RESULTS:

HEAVY METALS CONTENT IN SURFACE COATING (Canada Consumer Product Safety Act - Toys Regulations, SOR/2011-17 Sec. 23 with Amendment in SOR/2016-195)

Sample Identity	Color	Location	Style
(A)	Clear coating	Board	A-C
(B)	Bright orange coating	Pattern	A-C
(C)	Deep orange coating	Pattern	C
(D)	Green coating	Pattern	A-C
(E)	Aqua green coating	Pattern	C
(F)	Blue coating	Pattern	A-C
(G)	Aqua blue coating	Pattern	C
(H)	Red coating	Button	B
(I)	White coating	Pattern	C

RESULTS:

HEAVY METALS CONTENT IN SURFACE COATING (Canada Consumer Product Safety Act - Toys Regulations, SOR/2011-17 Sec. 23 with Amendment in SOR/2016-195)

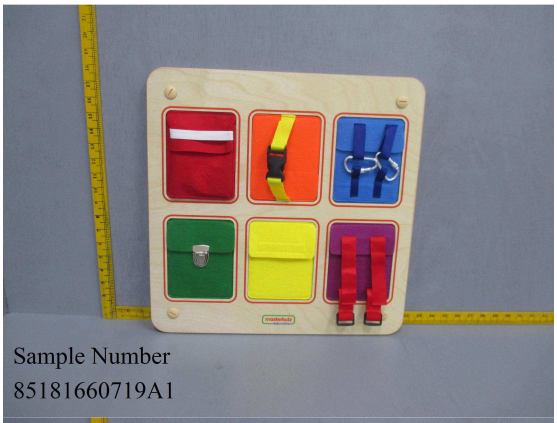
Analyte		As	Ba	Cd	Hg	Pb	Sb	Se	
Maximum	(T)	-	-	-	ND	90	-	-	
Limit (mg/kg)	(S)	1000	1000	1000	-	-	1000	1000	

Analyte		As	Ba	Cd	Hg	Pb	Sb	Se	
	Method	Result (mg/kg)							Conclusion
(A)	(T)	LT 10	LT 10	LT 10	ND	LT 10	LT 10	LT 10	Pass
	(S)	-	-	-	-	-	-	-	
(B)	(T)	LT 10	14	LT 10	ND	LT 10	LT 10	LT 10	Pass
	(S)	-	-	-	-	-	-	-	
(C)	(T)	LT 10	LT 10	LT 10	ND	LT 10	LT 10	LT 10	Pass
	(S)	-	-	-	-	-	-	-	
(D)	(T)	LT 10	LT 10	LT 10	ND	13	LT 10	LT 10	Pass
	(S)	-	-	-	-	-	-	-	
(E)	(T)	LT 10	LT 10	LT 10	ND	LT 10	LT 10	LT 10	Pass
	(S)	-	-	-	-	-	-	-	
(F)	(T)	LT 10	LT 10	LT 10	ND	19	LT 10	LT 10	Pass
	(S)	-	-	-	-	-	-	-	
(G)	(T)	LT 10	LT 10	LT 10	ND	LT 10	LT 10	LT 10	Pass
	(S)	-	-	-	-	-	-	-	
(H)	(T)	LT 10	720	LT 10	ND	LT 10	LT 10	LT 10	Pass
	(S)	-	-	-	-	-	-	-	
(I)	(T)	LT 10	LT 10	LT 10	ND	LT 10	LT 10	LT 10	Pass
	(S)	-	-	-	-	-	-	-	

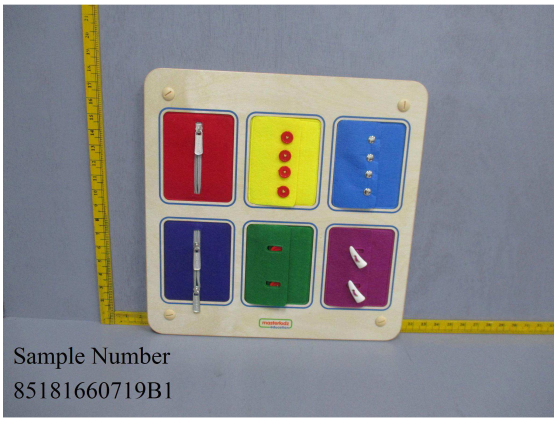
mg/kg = milligrams per kilogram (ppm=parts per million)
**= Average of duplicate analysis*
ND = Not detected
(T) = Total Analysis
(S) = Soluble analysis

LT = Less Than
As = Arsenic, Ba = Barium, Cd = Cadmium,
Hg = Mercury, Pb = Lead, Sb = Antimony,
Se = Selenium

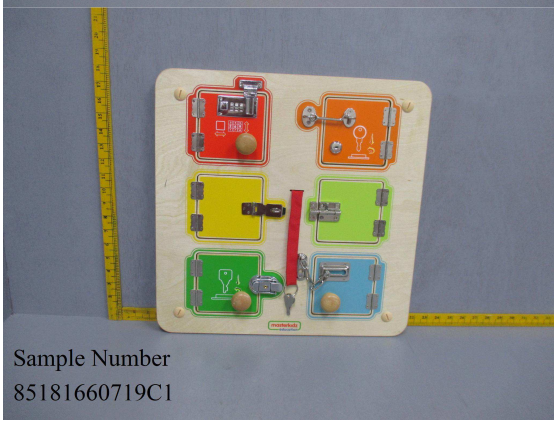
RESULTS:



Sample Number
85181660719A1



Sample Number
85181660719B1



Sample Number
85181660719C1