



CONSUMER PRODUCTS SERVICES DIVISION

CARPENTERS MANUFACTORY LIMITED

Technical Report: (8519)065-0819(A) /
(8518)318-0674(D)

March 26, 2019

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CARPENTERS MANUFACTORY LIMITED
HUANG JIN JI INDUSTRIAL ZONE
SHANG JIE VILLAGE
QI SHI TOWN
DONGGUAN, GUANGDONG
CHINA

Details of samples submitted on March 07, 2019

Sample Description:	WALL ELEMENTS - WALL-MOUNTED TRAY WALL ELEMENTS - ORAL CARE LEARNING BOARD WALL ELEMENTS - CHALK BOARD WALL ELEMENTS - MIRROR WALL ELEMENTS - FLEXIBLE MOUNTING SYSTEM - CATERPILLAR WALL ELEMENTS - FLEXIBLE MOUNTING SYSTEM-TRAIN 1.) PARTS		
Vendor:	CARPENTERS MANUFACTORY LIMITED 东莞天志木制品有限公司	Sample Size:	1 LOT(S)
Manufacturer:	N/A	Style No(s):	N/A
Buyer:	N/A	SKN/SKU No.:	N/A
Labeled Age Grade:	NOT PRESENT	PO No.:	N/A
Appropriate Age Grade:	NOT REQUESTED	Ref #:	N/A
Client Specified Age Grade:	NOT SPECIFIED	Country of Origin:	CHINA
Tested Age Grade:	N/A	Assortment No.:	N/A
UPC Code:	N/A	Country of Destination :	GLOBAL 全球



CARPENTERS MANUFACTORY LIMITED
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Details of samples submitted on January 25, 2019

Sample Description:	WALL ELEMENTS - WALL-MOUNTED TRAY WALL ELEMENTS - ORAL CARE LEARNING BOARD WALL ELEMENTS - CHALK BOARD WALL ELEMENTS - MIRROR WALL ELEMENTS - FLEXIBLE MOUNTING SYSTEM - CATERPILLAR WALL ELEMENTS - FLEXIBLE MOUNTING SYSTEM-TRAIN 1.) WALL ELEMENTS - WALL-MOUNTED TRAY 2.) WALL ELEMENTS - ORAL CARE LEARNING BOARD 3.) WALL ELEMENTS - CHALK BOARD 4.) WALL ELEMENTS - MIRROR 5.) WALL ELEMENTS - FLEXIBLE MOUNTING SYSTEM - CATERPILLAR 6.) WALL ELEMENTS - FLEXIBLE MOUNTING SYSTEM-TRAIN		
Vendor:	CARPENTERS MANUFACTORY LIMITED	Sample Size:	10
Manufacturer:	N/A	Style No(s):	ME04093, ME10346, ME06653, ME06912, ME06479, ME06486
Buyer:	N/A	SKN/SKU No.:	N/A
Labeled Age Grade:	FOR STYLE C, D = 2 YEARS+ / 3 YEARS+ ; FOR OTHERS = 3 YEARS+	PO No.:	N/A
Appropriate Age Grade:	NOT REQUESTED	Ref #:	N/A
Client Specified Age Grade:	NOT SPECIFIED	Country of Origin:	CHINA
Tested Age Grade:	FOR C, D = OVER 2 YEARS OF AGE ; FOR OTHERS = OVER 3 YEARS OF AGE	Assortment No.:	N/A
UPC Code:	6955920004093, 6955920010346, 6955920006653, 6955920006912, 6955920006486	Country of Destination :	GLOBAL

EXECUTIVE SUMMARY:

The samples submitted on March 07, 2019 are as follow:

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

- The labeling requirements of ASTM F963-17, "Standard consumer safety specification for toy safety".



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EXECUTIVE SUMMARY:

The test results of the samples submitted on January 25, 2019 as reported in Technical Report No. (8518)318-0674 are as follow:

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

- Labeling requirements of "CE marking, manufacturer/ Importer name and address, and product identification" under "Directive 2009/48/EC Safety of Toy".
- 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 mechanical and physical properties requirements of the tested subclauses of the European Standard, "Safety of toys", EN71: Part 1:2014+A1:2018, clauses 1-7.
- 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+A3:2018.
- The 17 phthalates content requirements of the client's specifications.
- 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 flammability requirements of 16 CFR 1500.3(c)(6)(vi), "Flammable solid" (FHSA regulations).
- 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 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 hazards requirements of ASTM F963-17, "Standard consumer safety specification for toy safety".
- 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 mechanical hazards requirements of the tested sections of Canada Consumer Product Safety Act, Toys Regulations, SOR/2011-17 and Schedule 2.
- 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.
- The total lead content of 100ppm requirements by composite testing in substrate materials (Consumer Products Safety Improvement Act (CPSIA) of 2008).



EXECUTIVE SUMMARY:

The test results of the samples submitted on January 25, 2019 as reported in Technical Report No. (8518)318-0674 are as follow:

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

- The cellulose nitrate requirements of Canada Toys Regulations, SOR/2011-17, section 21.
- 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).
- The flammability requirements of the European Standard "Safety of Toys", EN 71: Part 2: 2011+ A1: 2014.
- 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 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 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 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 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 style # B sample(s) MEET the following requirement(s):

- The initial total heavy metals content analysis for 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 style # D sample(s) MEET the following requirement(s):

- 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.



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EXECUTIVE SUMMARY:

The test results of the samples submitted on January 25, 2019 as reported in Technical Report No. (8518)318-0674 are as follow:

- 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: According to ASTM F963-17, "Standard consumer safety specification on toy safety", Annex A11.10.1.5, exemption were granted to paper and paperboard. Therefore, the heavy metals content in substrate analysis of some components of ASTM F963-17, Section 4.3.5.2(2)(b) was not conducted.
- Note: The toy is intended for children under 36 months. The small parts warning present on the relevant package is not applicable.
- Note: The manufacturer / importer information was present on the packaging only. It has to be noted that, according to TSD 2009/48/EC, the manufacturers/ importer shall indicate their name, registered trade name or registered trade mark and the address at which they can be contacted on the toy, or, where that is not possible, on its packaging or in a document accompanying the toy.
- Note: The product identification is present on the packaging only. It has to be noted that, according to TSD 2009/48/EC, 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.
- 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.

BUREAU VERITAS SHENZHEN CO., LTD.

Hon Yin Kan
Manager
Toys And Juvenile Products Department



RESULTS:

PART 1

The samples submitted on March 07, 2019 are as follow:

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.

LABELING AND INSTRUCTIONAL REQUIREMENT (ASTM F963-17)

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

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



RESULTS:

PART 2

The test results of the samples submitted on January 25, 2019 as reported in Technical Report No. (8518)318-0674 are as follow:

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.

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:

PART 2

For style # C, D sample(s) only:

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	1500.52(b)
Torque Test	4 in-lbs	1500.53(e)
Tension Test	15 lbs	1500.53(f)
Compression Test	30 lbs	1500.53(g)



RESULTS:

PART 2

For style # C, D sample(s) only:

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	M
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	N/A
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:

PART 2

For style # A, B, E, F sample(s) only:

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:

PART 2

For style # A, B, E, F sample(s) only:

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	M
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:

PART 2

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) MEETS 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
F	Finnish language	I	Italian language	SZ	Swiss language
FR	French language	N	Norwegian language		



RESULTS:

PART 2

For style # C, D sample(s) only:

**MECHANICAL & PHYSICAL PROPERTIES
 (EN 71: PART 1 – 2014+A1 – 2018)**

Subclause	Requirement	Result
4.1	Material cleanliness	M
4.2	Assembly	M
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



RESULTS:

PART 2

For style # C, D sample(s) only:

**MECHANICAL & PHYSICAL PROPERTIES
 (EN 71: PART 1 – 2014+A1 – 2018)**

Subclause	Requirement	Result
4.15.5 & 7.18	Toy scooters	NA
4.16	Heavy immobile toys	NA
4.17.2	All projectiles	NA
4.17.3 & 7.7	Projectile toys with stored energy	NA
4.17.4 & 7.26	Certain projectiles toys without stored energy	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
4.26	Toy Disguise Costumes	NA
4.27.1	Flying toys – General	NA
4.27.2 & 7.25.1	Rotors and propellers on flying toys	NA
4.27.3 & 7.25.2	Rotors and propellers on remote controlled flying toys	NA
FOR TOYS INTENDED FOR CHILDREN UNDER 36 MONTHS		
5.1	General	M
5.1a	Small parts – as received	M
5.1b	Small parts, sharp points, sharp edges – after tests	M
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
5.4.2	Cords and chains in toys intended for children under 18 months	NA



RESULTS:

PART 2

For style # C, D sample(s) only:

**MECHANICAL & PHYSICAL PROPERTIES
 (EN 71: PART 1 – 2014+A1 – 2018)**

Subclause	Requirement	Result
5.4.3 & 7.22	Cords and chains in toys intended for children of 18 months or over but under 36 months	NA
5.4.4	Fixed loops, tangled loops and nooses	NA
5.4.5	Cords and chains on pull along toys	NA
5.4.6 & 7.21	Electrical cables	NA
5.4.7	Cross-sectional dimension of certain cords	NA
5.4.8	Self-retracting cords	NA
5.4.9 & 7.11 & 7.23	Toys attached to or intended to be strung across a cradle, cot or perambulator	NA
5.5 & 7.12	Liquid filled toys	NA
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
5.15 & 7.24	Sledges with cords for pulling	NA
6	Packaging	NA
WARNINGS, INSTRUCTIONS FOR USE		
7.1	General	NA
7.2	Toys not intended for children under 36 months	NA
7.5	Functional toys	NA

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:

PART 2

For style # A, B, E, F sample(s) only:

**MECHANICAL & PHYSICAL PROPERTIES
 (EN 71: PART 1 – 2014+A1 – 2018)**

Subclause	Requirement	Result
4.1	Material cleanliness	M
4.2	Assembly	M
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



RESULTS:

PART 2

For style # A, B, E, F sample(s) only:

**MECHANICAL & PHYSICAL PROPERTIES
 (EN 71: PART 1 – 2014+A1 – 2018)**

Subclause	Requirement	Result
4.15.5 & 7.18	Toy scooters	NA
4.16	Heavy immobile toys	NA
4.17.2	All projectiles	NA
4.17.3 & 7.7	Projectile toys with stored energy	NA
4.17.4 & 7.26	Certain projectiles toys without stored energy	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
4.26	Toy Disguise Costumes	NA
4.27.1	Flying toys – General	NA
4.27.2 & 7.25.1	Rotors and propellers on flying toys	NA
4.27.3 & 7.25.2	Rotors and propellers on remote controlled flying toys	NA
FOR TOYS INTENDED FOR CHILDREN UNDER 36 MONTHS		
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
5.4.2	Cords and chains in toys intended for children under 18 months	NA



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RESULTS:

PART 2

For style # A, B, E, F sample(s) only:

**MECHANICAL & PHYSICAL PROPERTIES
 (EN 71: PART 1 – 2014+A1 – 2018)**

Subclause	Requirement	Result
5.4.3 & 7.22	Cords and chains in toys intended for children of 18 months or over but under 36 months	NA
5.4.4	Fixed loops, tangled loops and nooses	NA
5.4.5	Cords and chains on pull along toys	NA
5.4.6 & 7.21	Electrical cables	NA
5.4.7	Cross-sectional dimension of certain cords	NA
5.4.8	Self-retracting cords	NA
5.4.9 & 7.11 & 7.23	Toys attached to or intended to be strung across a cradle, cot or perambulator	NA
5.5 & 7.12	Liquid filled toys	NA
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
5.15 & 7.24	Sledges with cords for pulling	NA
6	Packaging	M
WARNINGS, INSTRUCTIONS FOR USE		
7.1	General	M
7.2	Toys not intended for children under 36 months	M
7.5	Functional toys	NA

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:

PART 2

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

Subclause	Requirement	Result
4.1	Cellulose nitrate	NP
4.1	Surface flash on a piled surface	M
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						
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	-	-



RESULTS:

PART 2

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.

FLAMMABILITY (AS/NZS 8124.2: 2016)

Subclause	Requirement	Result
4.1	Celluloid (cellulose nitrate)	NP
4.1	Surface flash on a piled surface	M
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:

PART 2

For style # C, D sample(s) only:

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)	M
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



RESULTS:

PART 2

For style # C, D sample(s) only:

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

Subclause	Requirement	Result
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
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)	N/A
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



RESULTS:

PART 2

For style # C, D sample(s) only:

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

Subclause	Requirement	Result
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
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



RESULTS:

PART 2

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

Subclause	Requirement	Result
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:

PART 2

For style # A, B, E, F sample(s) only:

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)	M
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



RESULTS:

PART 2

For style # A, B, E, F sample(s) only:

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

Subclause	Requirement	Result
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	M
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
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



RESULTS:

PART 2

For style # A, B, E, F sample(s) only:

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

Subclause	Requirement	Result
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
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



RESULTS:

PART 2

For style # A, B, E, F sample(s) only:

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

Subclause	Requirement	Result
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:

PART 2

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.

**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:

PART 2

For style # C, D sample(s) only:

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

Section	Parameter / Requirement	Result
Mechanical Hazards		
4	Flexible film bag used for package	M
7	Small Toys and Detachable component	M
8	Metal edge	M
9	Wires frames	NA
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:

PART 2

For style # C, D sample(s) only:

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-accredited section*



RESULTS:

PART 2

For style # A, B, E, F sample(s) only:

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

Section	Parameter / Requirement	Result
Mechanical Hazards		
4	Flexible film bag used for package	M
7	Small Toys and Detachable component	NA
8	Metal edge	M
9	Wires frames	NA
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:

PART 2

For style # A, B, E, F sample(s) only:

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-accredited section*



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RESULTS:

PART 2

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) / CPSC-CH-C1001-09.4 (January 17, 2018).

Sample Identity	Color / Component	Location	Style
A.	Bright white coating	Board	C
	Black coating	Board	C
B.	Translucent glue	Glue on tool	B
	White plastic	Brush	B
C.	Flesh plastic	Bolt	B
	Silver printed clear plastic	Mirror	D
D.	White non-woven	Inner tongue	B
E.	Clear coating	Paint	A-F
F.	Bright orange coating	A1Y	A-F
G.	Deep orange coating	A2Y	E,F
H.	Green coating	A5Y	A-F
I.	Aqua green coating	A6Y	E,F
J.	Blue coating	A7Y	A-F
K.	Aqua blue coating	A8Y	B,E,F
L.	Brown coating	A9Y	B
M.	Dull pink coating	A10Y	B,E,F
N.	Purple coating	A11Y	E
O.	Red coating	A12Y	B
P.	Deep pink coating	A13Y	B
Q.	Grey coating	A15Y	B
R.	White coating	A16Y	B,E,F

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



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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) / CPSC-CH-C1001-09.4 (January 17, 2018).

Test Parameter:	Listed Phthalates (See Remark)		
Requirement:	Each 0.1%		
Sample ID	Detected Analyte	Concentration (%)	Conclusion
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
P.	ND	ND	PASS
Q.	ND	ND	PASS
R.	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:

PART 2

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.	Bright white coating Black coating	Board Board	C C	LT 0.005	PASS
B.	Translucent glue White plastic	Glue on tool Brush	B B	LT 0.005	PASS
C.	Flesh plastic Silver printed clear plastic	Bolt Mirror	B D	LT 0.005	PASS
D.	White non-woven	Inner tongue	B	LT 0.005	PASS
E.	Matt white plastic	Screw clip	A-F	LT 0.005	PASS
F.	Clear coating	Paint	A-F	LT 0.005	PASS
G.	Bright orange coating	A1Y	A-F	LT 0.005	PASS
H.	Deep orange coating	A2Y	E,F	LT 0.005	PASS
I.	Green coating	A5Y	A-F	LT 0.005	PASS
J.	Aqua green coating	A6Y	E,F	LT 0.005	PASS
K.	Blue coating	A7Y	A-F	LT 0.005	PASS
L.	Aqua blue coating	A8Y	B,E,F	LT 0.005	PASS
M.	Brown coating	A9Y	B	LT 0.005	PASS
N.	Dull pink coating	A10Y	B,E,F	LT 0.005	PASS
O.	Purple coating	A11Y	E	LT 0.005	PASS
P.	Red coating	A12Y	B	LT 0.005	PASS
Q.	Deep pink coating	A13Y	B	LT 0.005	PASS
R.	Grey coating	A15Y	B	LT 0.005	PASS
S.	White coating	A16Y	B,E,F	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:

PART 2

CLIENT'S 17 PHTHALATES CONTENT SPECIFICATION

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

	Color / Component	Location	Style
A.	Composite of Bright white coating Black coating	Board Board	C C
B.	Translucent glue White plastic	Glue on tool Brush	B B
C.	Flesh plastic Silver printed clear plastic	Bolt Mirror	B D
D.	White non-woven	Inner tongue	B
E.	Matt white plastic	Screw clip	A-F
F.	Clear coating	Paint	A-F
G.	Bright orange coating	A1Y	A-F
H.	Deep orange coating	A2Y	E,F
I.	Green coating	A5Y	A-F
J.	Aqua green coating	A6Y	E,F
K.	Blue coating	A7Y	A-F
L.	Aqua blue coating	A8Y	B,E,F
M.	Brown coating	A9Y	B
N.	Dull pink coating	A10Y	B,E,F
O.	Purple coating	A11Y	E
P.	Red coating	A12Y	B
Q.	Deep pink coating	A13Y	B
R.	Grey coating	A15Y	B
S.	White coating	A16Y	B,E,F



RESULTS:

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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
P	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	PASS
Q	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	PASS
R	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	PASS
S	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



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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 = Bis(2-methoxyethyl)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 $\geq 0.3\%$ of dihexyl phthalate
68515-51-5 / 68648-93-1



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MIGRATION OF CERTAIN ELEMENTS (European Standard EN 71 Part 3: 2013+A3:2018)

Test Method : European Standard EN 71 Part 3: 2013+A3:2018, Annex E.

Class: Category III - Scraped off toy material

Sample Identity	Color	Location	Style
A.	Bright white coating	Board	C
B.	Black coating	Board	C
C.	Translucent glue	Glue on tool	B
D.	White plastic	Brush	B
E.	Flesh plastic	Bolt	B
F.	Silver printed clear plastic	Mirror	D
G.	White hook & loop fastener	Velcro	B
H.	White paper sticker	Paper sticker	B-F
I.	White string	String of tool	B
J.	Red thread / red fabric	Tongue	B
K.	Deep red embroidery / red fabric	Tongue	B
L.	White embroidery / red fabric	Tongue	B
M.	White thread / orange / red printed white felt	Lollipop	B
N.	Yellow / orange printed white felt	Lemon	B
O.	Green / light green printed white felt	Cucumber	B
P.	Blue printed white felt	Salt	B
Q.	Clear coating	Paint	A-F
R.	Bright flesh wood	Wood board	A-F
S.	Deep flesh wood	Wood board	B,E,F
T.	Bright orange coating	A1Y	A-F
U.	Deep orange coating	A2Y	E,F
V.	Green coating	A5Y	A-F
W.	Aqua green coating	A6Y	E,F
X.	Blue coating	A7Y	A-F
Y.	Aqua blue coating	A8Y	B,E,F
Z.	Brown coating	A9Y	B
AA.	Dull pink coating	A10Y	B,E,F
AB.	Purple coating	A11Y	E
AC.	Red coating	A12Y	B
AD.	Deep pink coating	A13Y	B
AE.	Grey coating	A15Y	B
AF.	White coating	A16Y	B,E,F



RESULTS:

PART 2

MIGRATION OF CERTAIN ELEMENTS (European Standard EN 71 Part 3: 2013+A3:2018)

Test Method : European Standard EN 71 Part 3: 2013+A3:2018, Annex E.

Class: Category III - Scraped off toy material

Analyte	Requirement (mg/kg)	Result (mg/kg)					
		Sample ID					
		Category III	AE.	AF.	-	-	-
Aluminium (Al)	70000	6	8	-	-	-	-
Arsenic (As)	47	LT 2	LT 2	-	-	-	-
Boron (B)	15000	LT 2	LT 2	-	-	-	-
Barium (Ba)	18750	LT 2	LT 2	-	-	-	-
Cadmium (Cd)	17	LT 2	LT 2	-	-	-	-
Cobalt (Co)	130	LT 2	LT 2	-	-	-	-
Chromium III (Cr III)	460	LT 0.15	LT 0.15	-	-	-	-
Chromium VI (Cr VI)	0.2			-	-	-	-
Copper (Cu)	7700	LT 2	LT 2	-	-	-	-
Mercury (Hg)	94	LT 2	LT 2	-	-	-	-
Manganese (Mn)	15000	LT 2	LT 2	-	-	-	-
Nickel (Ni)	930	LT 2	LT 2	-	-	-	-
Lead (Pb)	23	LT 2	LT 2	-	-	-	-
Antimony (Sb)	560	LT 2	LT 2	-	-	-	-
Selenium (Se)	460	LT 2	LT 2	-	-	-	-
Tin (Sn)	180000	LT 2	LT 2	-	-	-	-
Organic tin	12	LT 2	LT 2	-	-	-	-
Strontium (Sr)	56000	LT 2	LT 2	-	-	-	-
Zinc (Zn)	46000	300	88	-	-	-	-
Mass of trace amount (gram)		-	-	-	-	-	-
Conclusion		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+A3:2018, Annex G by Gas Chromatography – Mass Spectroscopy analysis.



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TOTAL LEAD CONTENT IN SURFACE COATING BY COMPOSITE TESTING ("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

Element:				Lead		
Requirement: Maximum allowable limit:				90 mg/kg		
Sample Description				Result (mg/kg)		Conclusion
Color / Component	Location	Style	Overall	Potential		
(A) Bright white coating	Board	C	LT 10	-	PASS	
(B) Black coating	Board	C	LT 10	-	PASS	
(C) Clear coating	Paint	A-F	LT 10	-	PASS	
(D) Bright orange coating	A1Y	A-F	LT 10	-	PASS	
(E) Deep orange coating	A2Y	E,F	LT 10	-	PASS	
(F) Green coating	A5Y	A-F	LT 10	-	PASS	
(G) Aqua green coating	A6Y	E,F	LT 10	-	PASS	
(H) Blue coating	A7Y	A-F	LT 10	-	PASS	
(I) Aqua blue coating	A8Y	B,E,F	LT 10	-	PASS	
(J) Brown coating	A9Y	B	LT 10	-	PASS	
(K) Dull pink coating	A10Y	B,E,F	LT 10	-	PASS	
(L) Purple coating	A11Y	E	LT 10	-	PASS	
(M) Red coating	A12Y	B	LT 10	-	PASS	
(N) Deep pink coating	A13Y	B	LT 10	-	PASS	
(O) Grey coating	A15Y	B	LT 10	-	PASS	
(P) White coating	A16Y	B,E,F	LT 10	-	PASS	

LT = Less Than

* = Average of duplicate analyses

mg/kg = milligrams per kilogram (ppm = parts per million)

Potential = Estimated lead content per component is based on calculation by component individual weight



RESULTS:

PART 2

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

Test Method: U.S. CPSC-CH-E1001-08.3:2012 or U.S. CPSC-CH-E1002-08.3:2012

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

Analyte			Lead (Pb)	Conclusion	
Sample Description			Result (mg/kg)		
	Color / Component	Location	Style		
(A)	Translucent glue	Glue on tool	B	PASS	
	White plastic	Brush	B		
	Flesh plastic	Bolt	B		
(B)	White non-woven	Inner tongue	B	LT 10	PASS
(C)	Silver printed clear plastic	Mirror	D	LT 10	PASS
(D)	Silvery metal	Screw	A	LT 10	PASS
(E)	Bright silvery metal	Big screw	A-F	LT 10	PASS
(F)	Soft silvery metal	Flat head screw on board	B	LT 10	PASS
(G)	Matt silvery metal	Magnet inner tongue	B	LT 10	PASS
(H)	Dull silvery metal	Board	C	LT 10	PASS
(I)	Shiny silvery metal	Screw on board	E-F	LT 10	PASS
(J)	Sharp silvery metal	Bolt on board	E-F	LT 10	PASS
(K)	White paper sticker	Paper sticker	B-F	LT 10	PASS
(L)	Bright flesh wood	Wood board	A-F	LT 10	PASS

LT = Less Than

* = Average of duplicate analyses

mg/kg = milligrams per kilogram (ppm = parts per million)



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TOTAL HEAVY METALS CONTENT – INITIAL ANALYSIS FOR 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 8.3.1 and Annex A7.

Sample Identity	Color	Location	Style
Type I: Substrate other than modeling clay			
A.	White non-woven	Inner tongue	B

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

Analyte	As	Ba	Cd	Cr	Hg	Pb	Sb	Se	Conclusion
Sample	Result (mg/kg)								
A	LT 7	LT 10	LT 10	LT 7	LT 5	LT 10	LT 10	LT 10	PASS

mg/kg = milligrams per kilogram (ppm=parts per million)

LT = Less Than

ND = None Detected

Detection limit (mg/kg): As and Cr = 7, Hg = 5, other elements = 10

As = Arsenic, Ba = Barium, Cd = Cadmium,

Cr = Chromium, Hg = Mercury, Pb = Lead,

Sb = Antimony, Se = Selenium

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:

PART 2

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

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 (g)	Conclusion
Sample	Result (mg/kg)								(g)	
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	LT 2	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	LT 2	LT 2		PASS
K.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2		PASS
L.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2		PASS
M.	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
P.	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:

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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	Translucent glue	Glue on tool	B
B	White plastic	Brush	B
C	Flesh plastic	Bolt	B
D	Silver printed clear plastic	Mirror	D
E	White hook & loop fastener	Velcro	B
F	White string	String of tool	B
G	Red thread / red fabric	Tongue	B
H	Deep red embroidery / red fabric	Tongue	B
I	White embroidery / red fabric	Tongue	B
J	White thread / orange / red printed white felt	Lollipop	B
K	Yellow / orange printed white felt	Lemon	B
L	Green / light green printed white felt	Cucumber	B
M	Blue printed white felt	Salt	B
N	Light pink thread / white fabric	Inner tongue	B
O	Bright flesh wood	Wood board	A-F
P	Deep flesh wood	Wood board	B,E,F



RESULTS:

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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 (g)	Conclusion
Sample	Result (mg/kg)								(g)	
A	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	0.0648	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	6	LT 2		PASS
H	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	3	LT 2		PASS
I	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	4	LT 2		PASS
J	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	34	LT 2		PASS



RESULTS:

PART 2

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 (g)	Conclusion
Sample	Result (mg/kg)								(g)	
K	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	36	LT 2		PASS
L	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	41	LT 2		PASS
M	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	42	LT 2		PASS
N	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	8	LT 2		PASS
O	LT 2	4	LT 2		PASS					
P	LT 2	2	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.



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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)	Bright white coating	Board	C
(B)	Black coating	Board	C
(C)	Clear coating	Paint	A-F
(D)	Bright orange coating	A1Y	A-F
(E)	Deep orange coating	A2Y	E,F
(F)	Green coating	A5Y	A-F
(G)	Aqua green coating	A6Y	E,F
(H)	Blue coating	A7Y	A-F
(I)	Aqua blue coating	A8Y	B,E,F
(J)	Brown coating	A9Y	B
(K)	Dull pink coating	A10Y	B,E,F
(L)	Purple coating	A11Y	E
(M)	Red coating	A12Y	B
(N)	Deep pink coating	A13Y	B
(O)	Grey coating	A15Y	B
(P)	White coating	A16Y	B,E,F

Analyte		As	Ba	Cd	Hg	Pb	Sb	Se
Maximum Limit (mg/kg)	(T)	-	-	-	ND	90	-	-
	(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	11	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	14	LT 10	ND	LT 10	LT 10	LT 10	PASS
	(S)	-	-	-	-	-	-	-	



RESULTS:

PART 2

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 Limit (mg/kg)	(T) - (S) 1000	- 1000	- 1000	ND -	90 -	- 1000	- 1000

Analyte	As	Ba	Cd	Hg	Pb	Sb	Se	Conclusion
Method	Result (mg/kg)							Conclusion
(E)	LT 10	LT 10	LT 10	ND	LT 10	LT 10	LT 10	PASS
(S)	-	-	-	-	-	-	-	
(F)	LT 10	LT 10	LT 10	13	LT 10	LT 10	LT 10	PASS
(S)	-	-	-	-	-	-	-	
(G)	LT 10	LT 10	LT 10	ND	LT 10	LT 10	LT 10	PASS
(S)	-	-	-	-	-	-	-	
(H)	LT 10	LT 10	LT 10	19	LT 10	LT 10	LT 10	PASS
(S)	-	-	-	-	-	-	-	
(I)	LT 10	LT 10	LT 10	ND	LT 10	LT 10	LT 10	PASS
(S)	-	-	-	-	-	-	-	
(J)	LT 10	LT 10	LT 10	ND	LT 10	LT 10	LT 10	PASS
(S)	-	-	-	-	-	-	-	
(K)	LT 10	LT 10	LT 10	ND	LT 10	LT 10	LT 10	PASS
(S)	-	-	-	-	-	-	-	
(L)	LT 10	LT 10	LT 10	ND	LT 10	LT 10	LT 10	PASS
(S)	-	-	-	-	-	-	-	
(M)	LT 10	720	LT 10	ND	LT 10	LT 10	LT 10	PASS
(S)	-	-	-	-	-	-	-	



RESULTS:

PART 2

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 Limit (mg/kg)	(T) - (S) 1000	- 1000	- 1000	ND -	90 -	- 1000	- 1000

Analyte	As	Ba	Cd	Hg	Pb	Sb	Se	Conclusion
Method	Result (mg/kg)							Conclusion
(N)	(T) LT 10 (S) -	LT 10 -	LT 10 -	ND -	LT 10 -	LT 10 -	LT 10 -	PASS
(O)	(T) LT 10 (S) -	LT 10 -	LT 10 -	ND -	LT 10 -	LT 10 -	LT 10 -	PASS
(P)	(T) LT 10 (S) -	LT 10 -	LT 10 -	ND -	LT 10 -	LT 10 -	LT 10 -	PASS

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



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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.	Silver printed clear plastic	Mirror	D

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	LT 10	LT 10	LT 7	LT 5	LT 10	LT 10	PASS
B.	LT 7	LT 10	LT 10	LT 7	LT 5	LT 10	LT 10	PASS
C.	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



RESULTS:

PART 2

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		
Color / Component	Location	Style	(mg/kg)		
(A)	Bright white coating	Board	C	LT 10	PASS
(B)	Black coating	Board	C	LT 10	PASS

LT = Less Than
 * = Average of duplicate analyses

mg/kg = milligrams per kilogram (ppm = parts per million)
 ND = Not detected

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		
Color / Component	Location	Style	(mg/kg)		
(A)	Silver printed clear plastic	Mirror	D	LT 10	PASS
(B)	Bright silvery metal	Big screw	A-F	LT 10	PASS
(C)	Dull silvery metal	Board	C	LT 10	PASS
(D)	White paper sticker	Paper sticker	B-F		

LT = Less Than
 * = Average of duplicate analyses

mg/kg = milligrams per kilogram (ppm = parts per million)
 ND = Not detected



RESULTS:

PART 2

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)	Translucent glue	Glue on tool	B	LT 10	LT 10	LT 10	PASS
	White plastic	Brush	B				
	Flesh plastic	Bolt	B				
	White non-woven	Inner tongue	B				
(B)	Silver printed clear plastic	Mirror	D	LT 10	LT 10	LT 10	PASS
	Matt white plastic	Screw clip	A-F				
	White hook & loop fastener	Velcro	B				

LT = Less than

= Insufficient sample for duplicate analyses

mg/kg = milligrams per kilogram (ppm = parts per million)

Operator: Tsui Chi Piu, Cyrus

RESULTS:

PART 2

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

Category:			Paints on Painted Article		
Element:			Cadmium		
Test Method:			In house acid digestion		
Maximum Allowable Limit:			1000 mg/kg (0.1% by weight)		
Test Component			Result (mg/kg)	Conclusion	
Colour/Component	Location	Style			
(A)	Bright white coating	Board	C	LT 10	PASS
(B)	Black coating	Board	C	LT 10	PASS
(C)	Clear coating	Paint	A-F	LT 10	PASS
(D)	Bright orange coating	A1Y	A-F	LT 10	PASS
(E)	Deep orange coating	A2Y	E,F	LT 10	PASS
(F)	Green coating	A5Y	A-F	LT 10	PASS
(G)	Aqua green coating	A6Y	E,F	LT 10	PASS
(H)	Blue coating	A7Y	A-F	LT 10	PASS
(I)	Aqua blue coating	A8Y	B,E,F	LT 10	PASS
(J)	Brown coating	A9Y	B	LT 10	PASS
(K)	Dull pink coating	A10Y	B,E,F	LT 10	PASS
(L)	Purple coating	A11Y	E	LT 10	PASS
(M)	Red coating	A12Y	B	LT 10	PASS
(N)	Deep pink coating	A13Y	B	LT 10	PASS
(O)	Grey coating	A15Y	B	LT 10	PASS
(P)	White coating	A16Y	B,E,F	LT 10	PASS

LT = Less than

* = Average of duplicate analyses

mg/kg = milligrams per kilogram (ppm = parts per million)



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PART 2

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			
A.	Bright white coating	Board	C
B.	Black coating	Board	C
Type II: Polymeric Materials			
C.	Translucent glue	Glue on tool	B
D.	White plastic	Brush	B
E.	Flesh plastic	Bolt	B
F.	Silver printed clear plastic	Mirror	D
G.	White hook & loop fastener	Velcro	B
Type VI: Other Materials Whether Mass Coloured Or Not			
H.	White paper sticker	Paper sticker	B-F
Type IV: Textiles			
I.	White string	String of tool	B
J.	Red thread / red fabric	Tongue	B
K.	Deep red embroidery / red fabric	Tongue	B
L.	White embroidery / red fabric	Tongue	B
M.	White thread / orange / red printed white felt	Lollipop	B
N.	Yellow / orange printed white felt	Lemon	B
O.	Green / light green printed white felt	Cucumber	B
P.	Blue printed white felt	Salt	B



RESULTS:

PART 2

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			
Q.	Clear coating	Paint	A-F
R.	Bright orange coating	A1Y	A-F
S.	Deep orange coating	A2Y	E,F
T.	Green coating	A5Y	A-F
U.	Aqua green coating	A6Y	E,F
V.	Blue coating	A7Y	A-F
W.	Aqua blue coating	A8Y	B,E,F
X.	Brown coating	A9Y	B
Y.	Dull pink coating	A10Y	B,E,F
Z.	Purple coating	A11Y	E
AA.	Red coating	A12Y	B
AB.	Deep pink coating	A13Y	B
AC.	Grey coating	A15Y	B
AD.	White coating	A16Y	B,E,F
Type VI: Other Materials Whether Mass Coloured Or Not			
AE.	Bright flesh wood	Wood board	A-F
AF.	Deep flesh wood	Wood board	B,E,F



RESULTS:

PART 2

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 (g)	Conclusion
Sample	Result (mg/kg)									
A.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2		PASS
B.	LT 2	3	LT 2	0.0670	PASS					
C.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	0.0648	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	LT 2	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	3	LT 2		PASS
L.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	4	LT 2		PASS
M.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	34	LT 2		PASS
N.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	36	LT 2		PASS
O.	LT 2	LT 2	LT 2	LT 2	LT 2	LT 2	41	LT 2		PASS



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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 (g)	Conclusion
Sample	Result (mg/kg)									
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
AE.	LT 2	4	LT 2		PASS					
AF.	LT 2	2	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:

PART 2

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.	Bright white coating Black coating	Board Board	C C
B.	Translucent glue White plastic	Glue on tool Brush	B B
C.	Flesh plastic Silver printed clear plastic	Bolt Mirror	B D
D.	White non-woven	Inner tongue	B
E.	Matt white plastic	Screw clip	A-F
F.	Clear coating	Paint	A-F
G.	Bright orange coating	A1Y	A-F
H.	Deep orange coating	A2Y	E,F
I.	Green coating	A5Y	A-F
J.	Aqua green coating	A6Y	E,F
K.	Blue coating	A7Y	A-F
L.	Aqua blue coating	A8Y	B,E,F
M.	Brown coating	A9Y	B
N.	Dull pink coating	A10Y	B,E,F
O.	Purple coating	A11Y	E
P.	Red coating	A12Y	B
Q.	Deep pink coating	A13Y	B
R.	Grey coating	A15Y	B
S.	White coating	A16Y	B,E,F



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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
P.	LT 0.005	LT 0.005	LT 0.005	LT 0.015	PASS
Q.	LT 0.005	LT 0.005	LT 0.005	LT 0.015	PASS
R.	LT 0.005	LT 0.005	LT 0.005	LT 0.015	PASS
S.	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



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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.	Bright white coating Black coating	Board Board	C C
B.	Translucent glue White plastic	Glue on tool Brush	B B
C.	Flesh plastic Silver printed clear plastic	Bolt Mirror	B D
D.	Clear coating	Paint	A-F
E.	Bright orange coating	A1Y	A-F
F.	Deep orange coating	A2Y	E,F
G.	Green coating	A5Y	A-F
H.	Aqua green coating	A6Y	E,F
I.	Blue coating	A7Y	A-F
J.	Aqua blue coating	A8Y	B,E,F
K.	Brown coating	A9Y	B
L.	Dull pink coating	A10Y	B,E,F
M.	Purple coating	A11Y	E
N.	Red coating	A12Y	B
O.	Deep pink coating	A13Y	B
P.	Grey coating	A15Y	B
Q.	White coating	A16Y	B,E,F



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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
P.	LT 0.005	LT 0.005	LT 0.005	LT 0.015	PASS
Q.	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



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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 fabric	Tongue	B
B. *	Deep red embroidery / red fabric	Tongue	B
C.	Orange / red printed white felt	Lollipop	B
D.	Yellow / orange printed white felt	Lemon	B
E.	Green / light green printed white felt Blue printed white felt	Cucumber Salt	B B

Test Parameter:		Aromatic Amines (Azocolourants)		
Requirement:		30 mg/kg		
Sample ID	Test Method	Detected Amine Number	Concentration (mg/kg (ppm))	Conclusion
A.	II	-	LT 10	PASS
B. *	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.



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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:

PART 2



Sample Number
85183180674A1



Sample Number
85183180674B1



Sample Number
85183180674C1



Sample Number
85183180674D1



Sample Number
85183180674E1



Sample Number
85183180674F1