



CARPENTERS MANUFACTORY LIMITED

Technical Report: (8817)153-0011

Sep 27, 2017

Date Received: Jun 2, 2017

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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:	SEE ATTACHMENT	Sample Size:	N/A
Vendor:	N/A	Style No(s):	SEE ATTACHMENT
Manufacturer:	N/A	SKN/SKU No.:	N/A
Buyer:	N/A	PO No.:	N/A
Labeled Age Grade:	NOT PRESENT	Ref #:	N/A
Appropriate Age Grade:	NOT REQUESTED	Country of Origin:	CHINA
Client Specified Age	3 Y+	Assortment No.:	N/A
Grade:		Country of Destination:	GLOBAL
Tested Age Grade:	OVER 3 YEARS OF AGE	Test Finished Date:	SEP 27, 2017
UPC Code:	N/A		
Test Starting Date:	JUN 2, 2017		

EXECUTIVE SUMMARY:

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

- The mechanical and physical properties requirements of the tested subclauses of the European Standard, "Safety of toys", EN71: Part 1: 2014 clauses 1-6.
- The flammability requirements of the European Standard "Safety of Toys", EN 71: Part 2: 2011+A1:2014.
- The migration of certain elements in Category I - Dry, brittle, powder-like or pliable toy material requirements of the European Standard, "Safety of Toys", EN 71 Part 3: 2013+A1:2014.
- The migration of certain elements in Category II - Liquid or sticky toy material requirements of the European Standard, "Safety of Toys", EN 71 Part 3: 2013+A1:2014.

To be continued

BUREAU VERITAS SHENZHEN CO.,LTD
DONGGUAN BRANCH

Harvey Xue
Manager, Analytical Lab

BUREAU VERITAS SHENZHEN CO.,LTD
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Kay Liu
Manager, Toys Lab

RT/RM/LL

REMARK

If there are questions or concerns on this report, please contact the following persons:

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EXECUTIVE SUMMARY:

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

- 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 mechanical hazards requirements of ASTM F963-16, "Standard consumer safety specification for toy safety".
- The flammability requirement of solids under ASTM F963-16 section 4.2 according to Annex A5, "Flammability testing procedure for solids and soft toys".
- The magnets requirements of ASTM F963-16, "Standard consumer safety specification for toy safety", section 4.38.
- The flammability requirement of fabrics under ASTM F963-16 section 4.2 according to Annex A6, "Flammability testing procedure for fabrics".
- The mechanical hazards requirements of 16 CFR 1500, "Federal Hazardous Substances Act Regulations".
- 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 the tested sections of Canada Consumer Product Safety Act, Toys Regulations, SOR/2011-17, SOR/2016-195 and Schedule 2.
- The cellulose nitrate requirements of Canada Toys Regulations, SOR/2011-17, SOR/2016-195, section 21.

The tested component sample(s) MEETS the following requirement(s):

- 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+A1:2014.
- 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.
- 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 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.

To be continued



EXECUTIVE SUMMARY:

The tested component sample(s) MEETS the following requirement(s):

- The total lead content in surface coating requirements of ASTM F963-16, "Standard consumer safety specification for toy safety", Section 4.3.5.1(1).
- The total lead content in substrate requirements of ASTM F963-16, "Standard consumer safety specification for toy safety", Section 4.3.5.2(2)(a).
- The soluble heavy metals content in surface coating requirements of ASTM F963-16, "Standard Consumer Safety Specification for Toy Safety," Section 4.3.5.1(2).
- The soluble heavy metals content in substrate requirements of ASTM F963-16, "Standard Consumer Safety Specification for Toy Safety," Section 4.3.5.2(2)(b).
- 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 in substrate materials (Consumer Products Safety Improvement Act (CPSIA) of 2008).
- The BBP, DBP & DEHP content requirements of the Consumer Product Safety Improvement Act (CPSIA) of 2008 Sec. 108(a) Prohibition On Sale of Certain Products Containing Specified Phthalates.
- The DNOP, DIDP & DINP content requirements of the Consumer Product Safety Improvement Act (CPSIA) of 2008 Sec. 108(b)(1) Prohibition On Sale of Certain Products Containing Specified Phthalates.
- The di(2-ethylhexyl) phthalate (DEHP) content requirement of ASTM F963-08, "Standard consumer safety specification for toy safety", section 4.3.8.
- The total lead content requirements in toys and child care articles according to the California Proposition 65 settlements of Alameda Superior Court, BG07350969, RG08378050 and San Francisco Superior Court 07-462991.
- The BBP, DBP, DEHP, DnHP and DIDP content requirements in toys, child care articles and watches according to the California Proposition 65 settlements of County of Sacramento case number 07AS04683, and the Alameda Superior Court case numbers BG07350969, RG08367601, RG07351032 and RG08378050.
- 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 applicable heavy metals content requirements for surface coatings of the Canada Consumer Product Safety Act, Toys Regulations, SOR/2011-17 Sec. 23 with its Latest Amendment.
- The BBP, DBP and DEHP content requirements of the Canada Consumer Product Safety Act, Phthalate Regulations, SOR/2016-188.
- The DNOP, DINP and DIDP content requirements of the Canada Consumer Product Safety Act, Phthalate Regulations, SOR/2016-188.

Note: At the request of the client, the sample(s) was evaluated for use by children 3y+.

Note: At the request of the client, the EN 71 Pt.1-2014: clause 7 labeling requirement(s) was not evaluated for this submission.

To be continued



EXECUTIVE SUMMARY:

- Note: At the request of the client, the ASTM F963-16 labeling requirement(s) was not evaluated for this submission.
- Note: No relevant packaging was provided with the submitted sample(s), consequently, evaluation of the labeling requirements of the Australian and New Zealand Standard AS/NZS ISO 8124 – Part 1 Mechanical and Physical Properties, was not conducted.
- Note: At the request of the client, ASTM F963-16 the section 4.25 about battery-operated toys requirement(s) was waived for this submission.
- Note: The sample(s) was not evaluated to the Normal Use testing requirements specified in ASTM F963-16, 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: The sample(s) submitted do not fall within the scope of the applicable heavy metals content requirements for plastics of the Canada Consumer Product Safety Act, Toys Regulations, SOR/2011-17 Sec. 27(3)(c) with its Latest Amendment thus the corresponding testing has/have not been conducted.
- Note: The sample(s) submitted do not fall within the scope of the total lead content in surface coating requirements for items contact with mouth of the Canada Consumer Product Safety Act, Consumer Products Containing Lead (Contact with Mouth) Regulations SOR/2010-273 with Amendment in SOR/2016-171 thus the corresponding testing has/have not been conducted.
- Note: At the request of client, test(s) was conducted on the certain component(s) of the submitted samples(s) / submitted component(s).
- 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.

ATTACHMENT

Style No(s):	Sample Description:
ME06776	多用途 1-100 数字方块板
MK08558	木匠玩具腰包玩具
MK00446	钓鱼游戏
MK00026	多功能双面学习板
ME10117	教学 3 倍放大镜台
ME07445	长方形彩色灯箱
ME09623	长方形沙盘游戏

- 1.) ME06776
- 2.) MK08558
- 3.) MK00446
- 4.) MK00026
- 5.) ME10117
- 6.) ME07445
- 7.) ME09623



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Tested Component(s) Description List:

Test Item(s)	Item / Component Description(s)	Location(s)	Style(s)
I001	Red paint	Surface	1→7
I002	Blue paint	Surface	1,3,5→7
I003	White paint	Surface	1
I004	White paint	Surface	1→7
I005	Black paint	Surface	1,4
I006	Green paint	Surface	1,3→7
I007	Yellow paint	Surface	1
I008	Yellow paint	Surface	2,3
I009	Orange paint	Surface	3
I010	Green paint	Surface	3
I011	All coating	Brand	2
I013	Blue coating	Sticker	4
I014	Yellow coating	Sticker	4
I015	Orange coating	Sticker	4
I016	Green coating	Sticker	4
I017	Red coating	Sticker	4
I018	White plastic	Base of board Remote control Buckle of brand	1 5 2
I019	Transparent glue	Glue of block	1,3
I020	Black plastic	Buckle of bag	2
I021	Red plastic	Parts	2
I022	Blue plastic	Parts	2
I023	Green plastic	Parts	2
I024	Green soft plastic	Tool	2
I025	Blue soft plastic	Tool	2
I026	Flesh plastic	Tool	2
I027	Transparent PVC	Connector of brand	2
I028	White plastic	Brand	2
I029	Clear laminated multi color printed white paper with adhesive	Sticker	3
I030	Clear laminated white paper	Board	4,7
I031	Black soft plastic with adhesive	Back of words & board	4
I032	Deep blue plastic	Pen	4
I033	Blue VEA	Eraser	4
I034	White plastic	Pen	4
I035	Bright white plastic	Plate	5
I036	Transparent plastic	Screen of remote control Plate & mirror	6 5



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Tested Component(s) Description List:

Test Item(s)	Item / Component Description(s)	Location(s)	Style(s)
I037	Grey soft plastic	Button	6
I038	White /green printed brown plastic/silvery metal	PCB of remote control	6
I039	Black plastic	Charge	6
I040	White printed black PVC	Wire jacket of charge	6
I041	Black PVC	SR of charge	6
I042	Matt black PVC	Plug of charge	6
I043	Deep black PVC	Wire jacket of plug	6
I044	Bright black PVC	Top of plug	6
I045	Dark black PVC	Connector of plug	6
I046	Dull black PVC	Big wire jacket	6
I047	White soft plastic	Cushion of frame	6
I048	Flesh soft plastic	Edge	7
I049	Red thread /red fabric	Belt of bag	2
I050	Dull red plastic	Bag	2
I051	Red /green embroidery /yellow fabric	Bag	2
I052	Yellow thread /yellow fabric	Edge of bag	2
I053	White string	String	3
I054	Beige string	String	4
I055	Black felt	Eraser	4
I056	Red fabric	Belt of bag	2
I057	Dull red plastic	Bag	2
I058	Yellow fabric	Bag	2
I059	Red /yellow embroidery /yellow fabric	Bag	2
I060	Yellow fabric	Edge of bag	2
I061	Beige string	String	4
I062	Black felt	Eraser	4
I063	Silvery metal	Connector of band	2,6
I064	Silvery metal	Rivet of connector	2
I065	Silvery metal	Screw	3,6
I066	Silvery metal	Screw	5,7
I067	Silvery metal	Spring of remote control	6
I068	Silvery metal	Pin of charge	6
I069	Silvery metal	Plug of charge(big)	6
I070	Silvery metal	Plug of charge (small)	6
I071	Silvery metal	Plug	6
I072	Silvery metal	Big screw of frame	6
I073	Blue ink	Ink	4



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Tested Component(s) Description List:

Test Item(s)	Item / Component Description(s)	Location(s)	Style(s)
I074	White floss	Filler	4
I075	Red powder	Chalk	4
I076	Blue powder	Chalk	4
I077	Green powder	Chalk	4
I078	Yellow powder	Chalk	4
I079	White powder	Chalk	4
I081	Clear glass	Glass	6,7
I082	Natural wood	Body	1→7
I083	Natural plywood	Body	1→5
I084	Fibreboard	Words	4
I085	Blue printed white paper	Sticker	4
I086	Yellow printed white paper	Sticker	4
I087	Orange printed white paper	Sticker	4
I088	Green printed white paper	Sticker	4
I089	Red printed white paper	Sticker	4
I090	Yellow PVC	Wire jacket	6
I091	Blue PVC	Wire jacket	6
I092	Brown PVC	Wire jacket	6
I093	Green PVC	Wire jacket	6
I095	White plastic	Cover	6
I096	Green plastic	Housing	6
I097	White printed black plastic	Sleeve	6
I098	Clear plastic	Mirror	5

Remark:

- The item(s) 027-028,045-046, 090-093 were provided by client dated on Sep 21, 2017.
- The results of Item 001-010 were transferred from BV(Dong guan) report No.(8817)080-0083 dated on Mar 29, 2017.
- The results of Item 082-083 were transferred from BV(Dong guan) report No.(8817)089-0028(R2) dated on Apr 14, 2017.



RESULTS:

APPROPRIATE AGE GRADE DETERMINATION

The Appropriate Age Grade is determined with reference to the EN71 : Part 1 : 2014, CR 14379:2002 "Classification of toys-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				
NP	None Present				
NT	Not Tested				
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:

**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	M
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	M
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	M
4.17.1	Projectiles – General	NA



RESULTS:

Subclause	Requirement	Result
4.17.2	Projectiles toys without stored energy	NA
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- 4.20.2.4, 4.20.2.6-4.20.2.12 7.14	Acoustics	NA
*4.20.2.5	Acoustics– Toys using headphones or earphones	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	M
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	Filings, 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



RESULTS:

Subclause	Requirement	Result
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
6	Packaging	NT
	WARNINGS, INSTRUCTIONS FOR USE	
7	CE Mark	NT
7	Manufacturer name and address	NT
7	Importer name and address	NT
7	Product Identification	NT
7.1	General	NT
7.2	Toys not intended for children under 36 months	NT
7.5	Functional toys	NT



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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						
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	-	-

* Note: Subclause indicated with * are not accredited.



RESULTS:

Migration of Certain Elements – European Standard EN 71 Part 3: 2013+A1: 2014

Test Method: European Standard EN 71 Part 3: 2013+A1: 2014, Annex E.

Class: Category I - Dry, brittle, powder-like or pliable toy material

Analyte	Requirement (mg/kg)	Result (mg/kg)				
		Test Item(s)				
	Category I	I075	I076	I077	I078	I079
Aluminium (Al)	5625	130	120	120	220	120
Arsenic (As)	3.8	LT 0.15	LT 0.15	LT 0.15	0.22	LT 0.15
Boron (B)	1200	LT 2	LT 2	LT 2	LT 2	LT 2
Barium (Ba)	1500	7	7	6	6	6
Cadmium (Cd)	1.3	LT 0.15	LT 0.15	LT 0.15	LT 0.15	LT 0.15
Cobalt (Co)	10.5	LT 2	LT 2	LT 2	LT 2	LT 2
Chromium III (Cr III)	37.5	0.32	0.28	0.27	0.55	1.2
Chromium VI (Cr VI)	0.02	LT 0.0020#	LT 0.0020#	LT 0.0020#	LT 0.0020#	LT 0.0020#
Copper (Cu)	622.5	5	5	5	5	5
Mercury (Hg)	7.5	LT 0.15	LT 0.15	LT 0.15	LT 0.15	LT 0.15
Manganese (Mn)	1200	6	7	9	16	11
Nickel (Ni)	75	LT 2	LT 2	LT 2	LT 2	LT 2
Lead (Pb)	13.5	4.2	4.4	4.1	10	4.6
Antimony (Sb)	45	LT 2	LT 2	LT 2	LT 2	LT 2
Selenium (Se)	37.5	LT 2	LT 2	LT 2	LT 2	LT 2
Tin (Sn)	15000	0.360	0.480	0.300	0.330	0.400
Organic tin	0.9	LT 0.049#	LT 0.049#	LT 0.049#	LT 0.049#	LT 0.049#
Strontium (Sr)	4500	42	43	43	51	45
Zinc (Zn)	3750	5	6	6	6	5
Mass of trace amount (gram)		-	-	-	-	-
Conclusion		PASS	PASS	PASS	PASS	PASS



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RESULTS:

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

* = Average of duplicate analysis

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+A1:2014, Annex G by Gas Chromatography – Mass Spectroscopy analysis.



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RESULTS:

Migration of Certain Elements – European Standard EN 71 Part 3: 2013+A1: 2014

Test Method: European Standard EN 71 Part 3: 2013+A1: 2014, Annex E.

Class: Category II - Liquid or sticky toy material

Analyte	Requirement (mg/kg)	Result (mg/kg)			
		Test Item(s)			
	Category II	I073	-	-	-
Aluminium (Al)	1406	4	-	-	-
Arsenic (As)	0.9	LT 0.15	-	-	-
Boron (B)	300	LT 2	-	-	-
Barium (Ba)	375	5	-	-	-
Cadmium (Cd)	0.3	LT 0.15	-	-	-
Cobalt (Co)	2.6	LT 2	-	-	-
Chromium III (Cr III)	9.4	0.041	-	-	-
Chromium VI (Cr VI)	0.005	LT 0.0020#	-	-	-
Copper (Cu)	156	14	-	-	-
Mercury (Hg)	1.9	LT 0.15	-	-	-
Manganese (Mn)	300	4	-	-	-
Nickel (Ni)	18.8	LT 2	-	-	-
Lead (Pb)	3.4	LT 0.5	-	-	-
Antimony (Sb)	11.3	LT 2	-	-	-
Selenium (Se)	9.4	LT 2	-	-	-
Tin (Sn)	3750	0.17	-	-	-
Organic tin	0.2	LT 0.049#	-	-	-
Strontium (Sr)	1125	4	-	-	-
Zinc (Zn)	938	12	-	-	-
Mass of trace amount (gram)		-	-	-	-
Conclusion		PASS	-	-	-



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RESULTS:

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

* = Average of duplicate analysis

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+A1:2014, Annex G by Gas Chromatography – Mass Spectroscopy analysis.



RESULTS:

Migration of Certain Elements – European Standard EN 71 Part 3: 2013+A1: 2014

Test Method: European Standard EN 71 Part 3: 2013+A1: 2014, Annex E.

Class: Category III - Scraped off toy material

Analyte	Requirement (mg/kg)	Result (mg/kg)				
		Test Item(s)				
	Category III	I001	I002	I003	I004	I005
Aluminium (Al)	70000	10	12	120	3	7
Arsenic (As)	47	LT 2	LT 2	LT 2	LT 2	LT 2
Boron (B)	15000	LT 2	LT 2	LT 2	LT 2	2
Barium (Ba)	18750	3	LT 2	LT 2	LT 2	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	0.24
Chromium VI (Cr VI)	0.2					LT 0.0020#
Copper (Cu)	7700	4	4	4	4	6
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	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	3
Zinc (Zn)	46000	750	940	1500	660	4700
Mass of trace amount (gram)		-	-	-	-	-
Conclusion		PASS	PASS	PASS	PASS	PASS



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RESULTS:

Analyte	Requirement (mg/kg)	Result (mg/kg)				
		Test Item(s)				
	Category III	I006	I007	I008	I009	I010
Aluminium (Al)	70000	39	8	56	10	10
Arsenic (As)	47	LT 2	LT 2	LT 2	LT 2	LT 2
Boron (B)	15000	5	LT 2	LT 2	LT 2	LT 2
Barium (Ba)	18750	LT 2	LT 2	LT 2	LT 2	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	4	3	4	5	4
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	2	LT 2	LT 2	LT 2	LT 2
Zinc (Zn)	46000	3800	740	1100	840	560
Mass of trace amount (gram)		-	-	-	-	-
Conclusion		PASS	PASS	PASS	PASS	PASS



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RESULTS:

Analyte	Requirement (mg/kg)	Result (mg/kg)				
		Test Item(s)				
	Category III	I011	I018	I019	I020	I021
Aluminium (Al)	70000	21	LT 2	4	2	2
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	4	LT 2	3	LT 2	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	25	3	LT 2	3	3
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	24	LT 2	LT 2	LT 2	LT 2
Organic tin	12	2.09#	LT 2	LT 2	LT 2	LT 2
Strontium (Sr)	56000	53	LT 2	LT 2	LT 2	LT 2
Zinc (Zn)	46000	10	2	4	3	3
Mass of trace amount (gram)		0.0258	-	-	-	-
Conclusion		PASS	PASS	PASS	PASS	PASS



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RESULTS:

Analyte	Requirement (mg/kg)	Result (mg/kg)				
		Test Item(s)				
	Category III	I022	I023	I024	I025	I026
Aluminium (Al)	70000	2	2	LT 2	5	2
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	LT 2	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	2	3	2	2	4
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	2	16	LT 2	2	3
Mass of trace amount (gram)		-	-	-	-	-
Conclusion		PASS	PASS	PASS	PASS	PASS



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RESULTS:

Analyte	Requirement (mg/kg)	Result (mg/kg)				
		Test Item(s)				
	Category III	I027	I028	I029	I030	I031
Aluminium (Al)	70000	4	LT 2	11	580	20
Arsenic (As)	47	LT 2	LT 2	2	LT 2	LT 2
Boron (B)	15000	LT 2	LT 2	LT 2	3	LT 2
Barium (Ba)	18750	16	26	4	3	11
Cadmium (Cd)	17	LT 2	LT 2	LT 2	LT 2	LT 2
Cobalt (Co)	130	LT 2	LT 2	LT 2	8	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	4	LT 2	LT 2	3	3
Mercury (Hg)	94	LT 2	LT 2	LT 2	LT 2	LT 2
Manganese (Mn)	15000	LT 2	LT 2	10	19	3
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	100	38	670
Zinc (Zn)	46000	20	LT 2	LT 2	10	4
Mass of trace amount (gram)		-	-	-	-	-
Conclusion		PASS	PASS	PASS	PASS	PASS



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RESULTS:

Analyte	Requirement (mg/kg)	Result (mg/kg)				
		Test Item(s)				
	Category III	I032	I033	I034	I035	I036
Aluminium (Al)	70000	5	3	3	3	LT 2
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	21	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	3	5	3	3	3
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	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	5	8	8	4	2
Mass of trace amount (gram)		-	-	-	-	-
Conclusion		PASS	PASS	PASS	PASS	PASS



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RESULTS:

Analyte	Requirement (mg/kg)	Result (mg/kg)			
		Test Item(s)			
	Category III	I037	I039	I040	I041
Aluminium (Al)	70000	4	3	12	9
Arsenic (As)	47	LT 2	LT 2	LT 2	LT 2
Boron (B)	15000	LT 2	LT 2	LT 2	LT 2
Barium (Ba)	18750	LT 2	2	LT 2	LT 2
Cadmium (Cd)	17	LT 2	LT 2	LT 2	LT 2
Cobalt (Co)	130	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
Chromium VI (Cr VI)	0.2				
Copper (Cu)	7700	4	4	9	4
Mercury (Hg)	94	LT 2	LT 2	LT 2	LT 2
Manganese (Mn)	15000	LT 2	LT 2	LT 2	LT 2
Nickel (Ni)	930	LT 2	LT 2	LT 2	LT 2
Lead (Pb)	160	LT 2	LT 2	LT 2	LT 2
Antimony (Sb)	560	LT 2	LT 2	LT 2	LT 2
Selenium (Se)	460	LT 2	LT 2	LT 2	LT 2
Tin (Sn)	180000	LT 2	LT 2	LT 2	LT 2
Organic tin	12	LT 2	LT 2	LT 2	LT 2
Strontium (Sr)	56000	LT 2	LT 2	LT 2	LT 2
Zinc (Zn)	46000	5	4	3	4
Mass of trace amount (gram)		-	-	-	-
Conclusion		PASS	PASS	PASS	PASS



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RESULTS:

Analyte	Requirement (mg/kg)	Result (mg/kg)			
		Test Item(s)			
	Category III	I042	I043	I044	I045
Aluminium (Al)	70000	11	8	5	9
Arsenic (As)	47	LT 2	LT 2	LT 2	LT 2
Boron (B)	15000	LT 2	LT 2	LT 2	LT 2
Barium (Ba)	18750	LT 2	LT 2	LT 2	2
Cadmium (Cd)	17	LT 2	LT 2	LT 2	LT 2
Cobalt (Co)	130	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
Chromium VI (Cr VI)	0.2				
Copper (Cu)	7700	4	11	3	6
Mercury (Hg)	94	LT 2	LT 2	LT 2	LT 2
Manganese (Mn)	15000	LT 2	LT 2	LT 2	LT 2
Nickel (Ni)	930	LT 2	LT 2	LT 2	LT 2
Lead (Pb)	160	LT 2	LT 2	LT 2	LT 2
Antimony (Sb)	560	LT 2	LT 2	LT 2	LT 2
Selenium (Se)	460	LT 2	LT 2	LT 2	LT 2
Tin (Sn)	180000	LT 2	LT 2	LT 2	LT 2
Organic tin	12	LT 2	LT 2	LT 2	LT 2
Strontium (Sr)	56000	LT 2	LT 2	LT 2	2
Zinc (Zn)	46000	6	13	3	9
Mass of trace amount (gram)		-	-	-	-
Conclusion		PASS	PASS	PASS	PASS



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RESULTS:

Analyte	Requirement (mg/kg)	Result (mg/kg)			
		Test Item(s)			
	Category III	I046	I047	I048	I049
Aluminium (Al)	70000	4	LT 2	2	4
Arsenic (As)	47	LT 2	LT 2	LT 2	LT 2
Boron (B)	15000	LT 2	LT 2	LT 2	LT 2
Barium (Ba)	18750	LT 2	LT 2	LT 2	38
Cadmium (Cd)	17	LT 2	LT 2	LT 2	LT 2
Cobalt (Co)	130	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
Chromium VI (Cr VI)	0.2				
Copper (Cu)	7700	LT 2	3	3	4
Mercury (Hg)	94	LT 2	LT 2	LT 2	LT 2
Manganese (Mn)	15000	LT 2	LT 2	LT 2	LT 2
Nickel (Ni)	930	LT 2	LT 2	LT 2	LT 2
Lead (Pb)	160	LT 2	LT 2	LT 2	LT 2
Antimony (Sb)	560	LT 2	LT 2	LT 2	LT 2
Selenium (Se)	460	LT 2	LT 2	LT 2	LT 2
Tin (Sn)	180000	LT 2	LT 2	LT 2	LT 2
Organic tin	12	LT 2	LT 2	LT 2	LT 2
Strontium (Sr)	56000	LT 2	LT 2	LT 2	4
Zinc (Zn)	46000	LT 2	3	4	5
Mass of trace amount (gram)		-	-	-	-
Conclusion		PASS	PASS	PASS	PASS



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RESULTS:

Analyte	Requirement (mg/kg)	Result (mg/kg)				
		Test Item(s)				
	Category III	I050	I051	I052	I053	I054
Aluminium (Al)	70000	6	11	5	5	14
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	5	4	8	3	5
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	4	6	4	3	8
Mercury (Hg)	94	LT 2	LT 2	LT 2	LT 2	LT 2
Manganese (Mn)	15000	LT 2	LT 2	LT 2	LT 2	4
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	3	LT 2	LT 2	2
Zinc (Zn)	46000	15	12	4	7	12
Mass of trace amount (gram)		-	-	-	-	-
Conclusion		PASS	PASS	PASS	PASS	PASS



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RESULTS:

Analyte	Requirement (mg/kg)	Result (mg/kg)				
		Test Item(s)				
	Category III	I055	I074	I082	I083	I084
Aluminium (Al)	70000	4	4	LT 2	3	5
Arsenic (As)	47	LT 2	LT 2	LT 2	LT 2	LT 2
Boron (B)	15000	LT 2	LT 2	13	3	10
Barium (Ba)	18750	2	LT 2	3	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	4	9	2	3	3
Mercury (Hg)	94	LT 2	LT 2	LT 2	LT 2	LT 2
Manganese (Mn)	15000	LT 2	LT 2	8	4	37
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	34	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	7	10	3
Zinc (Zn)	46000	6	12	3	62	5
Mass of trace amount (gram)		-	-	-	-	-
Conclusion		PASS	PASS	PASS	PASS	PASS



RESULTS:

Analyte	Requirement (mg/kg)	Result (mg/kg)				
		Test Item(s)				
	Category III	I085	I086	I087	I088	I089
Aluminium (Al)	70000	28	10	32	84	30
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	2	9	9	8	5
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	9	9	12	5	9
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	28	85	44	42	32
Zinc (Zn)	46000	3	4	3	3	3
Mass of trace amount (gram)		0.0443	0.0768	0.0643	0.0609	0.0475
Conclusion		PASS	PASS	PASS	PASS	PASS

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

* = Average of duplicate analysis

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+A1:2014, Annex G by Gas Chromatography – Mass Spectroscopy analysis.



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RESULTS:

Total Cadmium Content – European Regulation (EC) No. 1907/2006 REACH Annex XVII, Item no. 23

Test Method : BS EN 1122: 2001, Method B or Acid digestion followed by Atomic Absorption Spectrophotometry or Inductively Coupled Plasma Spectrometry.

Maximum Allowable Limit :	Type I	Paints on Painted Article: 1000 mg/kg
	Type II	Plastics: 100 mg/kg
	Type III	Metals in Jewellery: 100 mg/kg

Test Item(s)	Type	Result	Unit	Conclusion
		Total Cadmium (Cd)		
I001	I	ND	mg/kg	PASS
I002	I	ND	mg/kg	PASS
I003	I	ND	mg/kg	PASS
I004	I	ND	mg/kg	PASS
I005	I	ND	mg/kg	PASS
I006	I	ND	mg/kg	PASS
I007	I	ND	mg/kg	PASS
I008	I	ND	mg/kg	PASS
I009	I	ND	mg/kg	PASS
I010	I	ND	mg/kg	PASS
I011	I	ND	mg/kg	PASS
I013+I014	I	ND	mg/kg	PASS
I015+I016+I017	I	ND	mg/kg	PASS
I018+I019+I020	II	ND	mg/kg	PASS
I021+I022+I023	II	ND	mg/kg	PASS
I024+I025+I026	II	ND	mg/kg	PASS
I027+I028	II	ND	mg/kg	PASS
I029+I030+I031	II	ND	mg/kg	PASS
I032+I033+I034	II	ND	mg/kg	PASS
I035+I036+I037	II	ND	mg/kg	PASS
I038+I039	II	ND	mg/kg	PASS
I040+I041+I042	II	ND	mg/kg	PASS
I043+I044	II	ND	mg/kg	PASS
I045+I046	II	ND	mg/kg	PASS
I047+I048	II	ND	mg/kg	PASS
I090+I091+I092	II	ND	mg/kg	PASS
I093	II	ND	mg/kg	PASS
I095	II	ND	mg/kg	PASS



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RESULTS:

Note / key:

ND = Not detected

mg/kg = milligram(s) per kilogram

Detection Limit (mg/kg) : 10



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 Gas Chromatograph Mass Spectrometer.

Test Parameter:	BBP	DBP	DEHP	SUM	-
Limit (%):	0.1 (Sum of three phthalates)				-
Test Item(s)	Result (%)				Conclusion
I001	ND	ND	ND	ND	PASS
I002	ND	ND	ND	ND	PASS
I003	ND	ND	ND	ND	PASS
I004	ND	ND	ND	ND	PASS
I005	ND	ND	ND	ND	PASS
I006	ND	ND	ND	ND	PASS
I007	ND	ND	ND	ND	PASS
I008	ND	ND	ND	ND	PASS
I009	ND	ND	ND	ND	PASS
I010	ND	ND	ND	ND	PASS
I011	ND	ND	0.021	0.021	PASS
I013+I014	ND	ND	ND	ND	PASS
I015+I016+I017	ND	ND	ND	ND	PASS
I018+I019+I020	ND	ND	ND	ND	PASS
I021+I022+I023	ND	ND	ND	ND	PASS
I024+I025+I026	ND	ND	ND	ND	PASS
I027	ND	ND	ND	ND	PASS
I028	ND	ND	ND	ND	PASS
I029+I030+I031	ND	ND	ND	ND	PASS
I032+I033+I034	ND	ND	ND	ND	PASS
I035+I036+I037	ND	ND	ND	ND	PASS
I038+I039	ND	ND	ND	ND	PASS
I040+I041+I042	ND	ND	ND	ND	PASS
I043+I044	ND	ND	ND	ND	PASS
I047+I048	ND	ND	ND	ND	PASS
I073	ND	ND	ND	ND	PASS
I090+I091+I092	ND	ND	ND	ND	PASS
I093	ND	ND	ND	ND	PASS
I095+I096+I097	ND	ND	ND	ND	PASS



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RESULTS:

Note / key:

BBP = Butyl benzyl phthalate

ND = Not detected

mg/kg = milligram(s) per kilogram

Detection Limit (%) : Each 0.005

DBP = Dibutyl phthalate

% = percent

DEHP = Di(2-ethylhexyl) phthalate

10000 mg/kg = 1 %



RESULTS:

DNOP/DINP/DIDP Contents in Toys and Childcare Articles which can be placed in the 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 Gas Chromatograph Mass Spectrometer.

Test Parameter:	DIDP	DINP	DNOP	SUM	-
Limit (%):	0.1 (Sum of three phthalates)				-
Test Item(s)	Result (%)				Conclusion
I001	ND	ND	ND	ND	PASS
I002	ND	ND	ND	ND	PASS
I003	ND	ND	ND	ND	PASS
I004	ND	ND	ND	ND	PASS
I005	ND	ND	ND	ND	PASS
I006	ND	ND	ND	ND	PASS
I007	ND	ND	ND	ND	PASS
I008	ND	ND	ND	ND	PASS
I009	ND	ND	ND	ND	PASS
I010	ND	ND	ND	ND	PASS
I011	ND	ND	ND	ND	PASS
I013+I014	ND	ND	ND	ND	PASS
I015+I016+I017	ND	ND	ND	ND	PASS
I018+I019+I020	ND	ND	ND	ND	PASS
I021+I022+I023	ND	ND	ND	ND	PASS
I024+I025+I026	ND	ND	ND	ND	PASS
I027	ND	ND	ND	ND	PASS
I028	ND	ND	ND	ND	PASS
I029+I030+I031	ND	ND	ND	ND	PASS
I032+I033+I034	ND	ND	ND	ND	PASS
I035+I036+I037	ND	ND	ND	ND	PASS
I038+I039	ND	ND	ND	ND	PASS
I040+I041+I042	ND	ND	ND	ND	PASS
I043+I044	ND	ND	ND	ND	PASS
I047+I048	ND	ND	ND	ND	PASS
I073	ND	ND	ND	ND	PASS

Note / key:

DNOP = Di-n-octyl phthalate DINP = Di-iso-nonyl phthalate DIDP = Di-iso-decyl phthalate
 ND = Not detected % = percent 10000 mg/kg = 1 %
 mg/kg = milligram(s) per kilogram
 Detection Limit (%) : Each 0.005



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		
Test Item(s)	Test Method	Detected Amine Number	Concentration (mg/kg (ppm))	Conclusion
I056+I057+I058	II	-	ND	PASS
I059	II	-	ND	PASS
I060+I061+I062	II	-	ND	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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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:

APPROPRIATE AGE GRADE DETERMINATION

<p>The Appropriate Age Grade is determined with reference to the Age Determination Guidelines of the Consumer Product Safety Commission (CPSC); and the ASTM F963-16, "Standard Consumer Safety Specification for Toy Safety". Annex A1</p>
<p>Note : The most stringent age grade from the Labeled Age Grade and the Appropriate Age Grade will be used for testing.</p>
<p>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.</p>

USE AND ABUSE TESTS

<p>The samples were undergo the tests in accordance with section 8.6 through 8.16, whichever is applicable</p>		
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)
Tip Over Test	3 times	1500.53(b)(4)(i)



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RESULTS:

PHYSICAL AND MECHANICAL HAZARDS (ASTM F963-16)

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	M
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)	NT
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	M
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:

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	Most rapid burn rate less than 0.1 of an inch per second.

FLAMMABILITY OF FABRICS (ASTM F963-16)

Textile Material Type:	Plain surface fabrics	
Requirement Reference	Observation	Result
Annex 6	Did Not Ignited	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 Determination Guidelines of the Consumer Product Safety Commission (CPSC); and the ASTM F963-11, "Standard Consumer Safety Specification on 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)
Tip Over Test	3 times	1500.53(b)(4)(i)



RESULTS:

PHYSICAL AND MECHANICAL HAZARDS (FHSA 16 CFR 1500)

Part	Requirement	Result
16 CFR 1500.47 & 1500.86(a)(6)	Sound Pressure Level – Toy Cap	N/A
16 CFR 1501	Small Parts	N/A
16 CFR 1500.49	Sharp Edges	M
16 CFR 1500.48	Sharp Points	M
16 CFR 1511	Pacifier	N/A
16 CFR 1510	Rattles	N/A
16 CFR 1500.18(a)(17)	Small Ball	N/A
16 CFR 1500.19	Small Objects, Small Balls, Marbles and Balloons	N/A
16 CFR 1500.86	Toy Caps	N/A
16 CFR 1500.14(b)(8)	Art Materials	N/A

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



RESULTS:

Total Lead Content in Surface Coating – ASTM International Standard ASTM F963-16, Section 4.3.5.1(1)

Test Method : ASTM International Standard ASTM F963-16, Section 8.3.1 and Annex A7.

Maximum Allowable Limit :	90 mg/kg
---------------------------	----------

Test Item(s)	Result	Unit	Conclusion
	Total Lead (Pb)		
I001	ND	mg/kg	PASS
I002	23	mg/kg	PASS
I003	20	mg/kg	PASS
I004	ND	mg/kg	PASS
I005	14	mg/kg	PASS
I006	ND	mg/kg	PASS
I007	ND	mg/kg	PASS
I008	16	mg/kg	PASS
I009	22	mg/kg	PASS
I010	ND	mg/kg	PASS
I011	ND	mg/kg	PASS
I013+I014	ND	mg/kg	PASS
I015+I016+I017	ND	mg/kg	PASS

Note / key:

- ND = Not detected
- mg/kg = milligram(s) per kilogram
- Detection Limit (mg/kg) : 10



RESULTS:

Total Lead Content in Substrate – ASTM International Standard ASTM F963-16, Section 4.3.5.2(2)(a)

Test Method : ASTM International Standard ASTM F963-16, Section 8.3.1 and Annex A7.

Maximum Allowable Limit :	100 mg/kg
---------------------------	-----------

Test Item(s)	Result	Unit	Conclusion
	Total Lead (Pb)		
I018+I019+I020	ND	mg/kg	PASS
I021+I022+I023	ND	mg/kg	PASS
I024+I025+I026	ND	mg/kg	PASS
I027	ND	mg/kg	PASS
I028	ND	mg/kg	PASS
I029+I030+I031	ND	mg/kg	PASS
I032+I033+I034	ND	mg/kg	PASS
I035+I036+I037	ND	mg/kg	PASS
I040+I041+I042	ND	mg/kg	PASS
I043+I044	ND	mg/kg	PASS
I045+I046	ND	mg/kg	PASS
I047+I048	ND	mg/kg	PASS
I063	ND	mg/kg	PASS
I064	ND	mg/kg	PASS
I065	ND	mg/kg	PASS
I066	ND	mg/kg	PASS
I067	ND	mg/kg	PASS
I068	ND	mg/kg	PASS
I069	ND	mg/kg	PASS
I070	ND	mg/kg	PASS
I071	14	mg/kg	PASS
I072	ND	mg/kg	PASS
I073	ND	mg/kg	PASS
I074	ND	mg/kg	PASS
I075+I076+I077	ND	mg/kg	PASS
I078+I079	ND	mg/kg	PASS
I080+I081	ND	mg/kg	PASS
I083	ND	mg/kg	PASS
I084	ND	mg/kg	PASS



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RESULTS:

Note / key:

ND = Not detected

mg/kg = milligram(s) per kilogram

Detection Limit (mg/kg) : 10



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RESULTS:

Soluble Heavy Metals Content in Surface Coating –ASTM F963-16, Section 4.3.5.1(2)

Test Method : ASTM International Standard ASTM F963-16, Section 8.3.2 to 8.3.4

Analyte	As	Ba	Cd	Cr	Hg	Pb	Sb	Se
Max. 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
Test Item(s)	Result (mg/kg)								(g)	
I001	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I002	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I003	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I004	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I005	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I006	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I007	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I008	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I009	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I010	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I011	ND	ND	ND	ND	ND	ND	ND	ND	0.0258	PASS
I013	ND	ND	ND	ND	ND	ND	ND	ND	0.0400	PASS
I014	ND	ND	ND	ND	ND	ND	ND	ND	0.0517	PASS
I015	ND	ND	ND	ND	ND	ND	ND	ND	0.0624	PASS
I016	ND	ND	ND	ND	ND	ND	ND	ND	0.0442	PASS
I017	ND	ND	ND	ND	ND	ND	ND	ND	0.0680	PASS

Note / key:

As = Arsenic

Ba = Barium

Cd = Cadmium

Cr = Chromium

Hg = Mercury

Pb = Lead

Sb = Antimony

Se = Selenium

ND = Not detected

g = gram(s)

% = percent

mg/kg = milligram(s) per kilogram

Detection Limit (mg/kg) : As : 2.5; Ba : 100; Cd : 7.5; Each (Cr, Hg, & Sb) : 6.0; Pb : 9.0; Se : 50



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RESULTS:

Analyte	As	Ba	Cd	Cr	Hg	Pb	Sb	Se	Mass of Trace Amount	Conclusion
Test Item(s)	Result (mg/kg)								(g)	
Type I: Substrate other than modeling clay										
I043	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I044	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I045	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I046	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I047	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I048	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I049	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I050	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I051	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I052	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I053	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I054	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I055	ND	ND	ND	ND	ND	ND	34	ND	-	PASS
I073	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I074	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I075	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I076	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I077	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I078	ND	ND	ND	ND	ND	10	ND	ND	-	PASS
I079	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I082	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I083	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I084	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS

Note / key:

As = Arsenic Ba = Barium Cd = Cadmium Cr = Chromium
Hg = Mercury Pb = Lead Sb = Antimony Se = Selenium
ND = Not detected g = gram(s) % = percent
mg/kg = milligram(s) per kilogram (ppm=parts per million)

Detection Limit (mg/kg) :

For Type I – As : 2.5; Ba : 100; Cd : 7.5; Each (Cr, Hg, & Sb) : 6.0; Pb : 9.0; Se : 50

For Type II – Each (As, Cr & Hg) : 2.5; Ba : 25; Cd : 5.0; Sb : 6.0; Pb : 9.0; Se : 50

Remark:

- Textiles (natural or synthetic) are exempted for lead content requirement according to clarification of Toy Industry Association for ASTM F963-16. The lead content analysis result of corresponding material herein is for client's reference only.



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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

Maximum Allowable Limit :	90 mg/kg
---------------------------	----------

Test Item(s)	Result	Unit	Conclusion
	Total Lead (Pb)		
I001	ND	mg/kg	PASS
I002	23	mg/kg	PASS
I003	20	mg/kg	PASS
I004	ND	mg/kg	PASS
I005	14	mg/kg	PASS
I006	ND	mg/kg	PASS
I007	ND	mg/kg	PASS
I008	16	mg/kg	PASS
I009	22	mg/kg	PASS
I010	ND	mg/kg	PASS
I011	ND	mg/kg	PASS
I013+I014	ND	mg/kg	PASS
I015+I016+I017	ND	mg/kg	PASS

Note / key:

ND = Not detected

mg/kg = milligram(s) per kilogram

Detection Limit (mg/kg) : 10



RESULTS:

Total Lead Content in Substrate Materials – Consumer Product Safety Improvement Act (CPSIA) of 2008 Sec. 101(a)(2)

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

Maximum Allowable Limit :	100 mg/kg
---------------------------	-----------

Test Item(s)	Result	Unit	Conclusion
	Total Lead (Pb)		
I018+I019+I020	ND	mg/kg	PASS
I021+I022+I023	ND	mg/kg	PASS
I024+I025+I026	ND	mg/kg	PASS
I027	ND	mg/kg	PASS
I028	ND	mg/kg	PASS
I029+I030+I031	ND	mg/kg	PASS
I032+I033+I034	ND	mg/kg	PASS
I035+I036+I037	ND	mg/kg	PASS
I040+I041+I042	ND	mg/kg	PASS
I043+I044	ND	mg/kg	PASS
I045+I046	ND	mg/kg	PASS
I047+I048	ND	mg/kg	PASS
I063	ND	mg/kg	PASS
I064	ND	mg/kg	PASS
I065	ND	mg/kg	PASS
I066	ND	mg/kg	PASS
I067	ND	mg/kg	PASS
I068	ND	mg/kg	PASS
I069	ND	mg/kg	PASS
I070	ND	mg/kg	PASS
I071	14	mg/kg	PASS
I072	ND	mg/kg	PASS
I073	ND	mg/kg	PASS
I074	ND	mg/kg	PASS
I075+I076+I077	ND	mg/kg	PASS
I078+I079	ND	mg/kg	PASS
I080+I081	ND	mg/kg	PASS
I083	ND	mg/kg	PASS
I084	ND	mg/kg	PASS



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RESULTS:

Note / key:

ND = Not detected
mg/kg = milligram(s) per kilogram
Detection Limit (mg/kg) : 30



RESULTS:

Phthalates Content in Children's Toys and Childcare Articles – Consumer Product Safety Improvement Act (CPSIA) of 2008 Sec. 108(a) Prohibition On Sale of Certain Products Containing Specified Phthalates - BBP / DBP / DEHP Content

Test Method : U.S. CPSC-CH-C1001-09.3

Test Parameter:	BBP	DBP	DEHP	-
Limit (%):	0.1	0.1	0.1	-
Test Item(s)	Result (%)			Conclusion
I001	ND	ND	ND	PASS
I002	ND	ND	ND	PASS
I003	ND	ND	ND	PASS
I004	ND	ND	ND	PASS
I005	ND	ND	ND	PASS
I006	ND	ND	ND	PASS
I007	ND	ND	ND	PASS
I008	ND	ND	ND	PASS
I009	ND	ND	ND	PASS
I010	ND	ND	ND	PASS
I011	ND	ND	0.021	PASS
I013+I014	ND	ND	ND	PASS
I015+I016+I017	ND	ND	ND	PASS
I018+I019+I020	ND	ND	ND	PASS
I021+I022+I023	ND	ND	ND	PASS
I024+I025+I026	ND	ND	ND	PASS
I027	ND	ND	ND	PASS
I028	ND	ND	ND	PASS
I029+I030+I031	ND	ND	ND	PASS
I032+I033+I034	ND	ND	ND	PASS
I035+I036+I037	ND	ND	ND	PASS
I038+I039	ND	ND	ND	PASS
I040+I041+I042	ND	ND	ND	PASS
I043+I044	ND	ND	ND	PASS
I047+I048	ND	ND	ND	PASS
I073	ND	ND	ND	PASS

Note / key:

BBP = Butyl benzyl phthalate

ND = Not detected

mg/kg = milligram(s) per kilogram

Detection Limit (%) : Each 0.005

DBP = Dibutyl phthalate

% = percent

DEHP = Di(2-ethylhexyl) phthalate

10000 mg/kg = 1 %



RESULTS:

Phthalates Content in Children's Toys and Childcare Articles – Consumer Product Safety Improvement Act (CPSIA) of 2008 Sec. 108(b)(1) Prohibition On Sale of Certain Products Containing Specified Phthalates - DNOP / DINP / DIDP Content

Test Method : U.S. CPSC-CH-C1001-09.3

Test Parameter:	DNOP	DINP	DIDP	-
Limit (%):	0.1	0.1	0.1	-
Test Item(s)	Result (%)			Conclusion
I001	ND	ND	ND	PASS
I002	ND	ND	ND	PASS
I003	ND	ND	ND	PASS
I004	ND	ND	ND	PASS
I005	ND	ND	ND	PASS
I006	ND	ND	ND	PASS
I007	ND	ND	ND	PASS
I008	ND	ND	ND	PASS
I009	ND	ND	ND	PASS
I010	ND	ND	ND	PASS
I011	ND	ND	ND	PASS
I013+I014	ND	ND	ND	PASS
I015+I016+I017	ND	ND	ND	PASS
I018+I019+I020	ND	ND	ND	PASS
I021+I022+I023	ND	ND	ND	PASS
I024+I025+I026	ND	ND	ND	PASS
I027	ND	ND	ND	PASS
I028	ND	ND	ND	PASS
I029+I030+I031	ND	ND	ND	PASS
I032+I033+I034	ND	ND	ND	PASS
I035+I036+I037	ND	ND	ND	PASS
I038+I039	ND	ND	ND	PASS
I040+I041+I042	ND	ND	ND	PASS
I043+I044	ND	ND	ND	PASS
I047+I048	ND	ND	ND	PASS
I073	ND	ND	ND	PASS

Note / key:

DNOP = Di-n-octyl phthalate DINP = Di-iso-nonyl phthalate DIDP = Di-iso-decyl phthalate
 ND = Not detected % = percent 10000 mg/kg = 1 %
 mg/kg = milligram(s) per kilogram
 Detection Limit (%) : Each 0.005



RESULTS:

Di(2-Ethylhexyl) Phthalate (DEHP) Content – ASTM International Standard ASTM F963-08, Section 4.3.8

Test Method : ASTM D3421-75 Standard recommended practice for extraction and analysis of plasticizer mixtures from vinyl chloride plastics.

Maximum Allowable Limit:	3%
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Test Item(s)	Result	Unit	Conclusion
	DEHP		
I027	ND	%	PASS
I028	ND	%	PASS
I040+I041+I042	ND	%	PASS
I043+I044	ND	%	PASS
I045+I046	0.019	%	PASS

Note / key:

DEHP = Di(2-ethylhexyl) phthalate

ND = Not detected % = percent

10000 mg/kg = 1 %

mg/kg = milligram(s) per kilogram

Detection Limit (%) : 0.5



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RESULTS:

Total Lead Content in Toys and Child Care Articles – California Proposition 65 settlements of Alameda Superior Court BG07350969, RG08378050, San Francisco Superior Court 07-462991

Test Method : Acid digestion followed by Atomic Absorption Spectrophotometry or Inductively Coupled Plasma Spectrometry.

Maximum Allowable Limit:	Type I	All product except baby bibs (PVC): 200 mg/kg
	Type II	All product except baby bibs (non PVC): 600 mg/kg
	Type III	Baby bibs: 200 mg/kg

Test Item(s)	Type	Result	Unit	Conclusion
		Total Lead (Pb)		
I018+I019+I020	II	ND	mg/kg	PASS
I021+I022+I023	II	ND	mg/kg	PASS
I024+I025+I026	II	ND	mg/kg	PASS
I027	I	ND	mg/kg	PASS
I028	II	ND	mg/kg	PASS
I029+I030+I031	II	ND	mg/kg	PASS
I032+I033+I034	II	ND	mg/kg	PASS
I035+I036+I037	II	ND	mg/kg	PASS
I040+I041+I042	I	ND	mg/kg	PASS
I043+I044	I	ND	mg/kg	PASS
I045+I046	I	ND	mg/kg	PASS
I047+I048	II	ND	mg/kg	PASS
I063	II	ND	mg/kg	PASS
I064	II	ND	mg/kg	PASS
I065	II	ND	mg/kg	PASS
I066	II	ND	mg/kg	PASS
I067	II	ND	mg/kg	PASS
I068	II	ND	mg/kg	PASS
I069	II	ND	mg/kg	PASS
I070	II	ND	mg/kg	PASS
I071	II	14	mg/kg	PASS
I072	II	ND	mg/kg	PASS
I073	II	ND	mg/kg	PASS
I074	II	ND	mg/kg	PASS
I075+I076+I077	II	ND	mg/kg	PASS
I078+I079	II	ND	mg/kg	PASS
I080+I081	II	ND	mg/kg	PASS
I083	II	ND	mg/kg	PASS
I084	II	ND	mg/kg	PASS



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RESULTS:

Note / key:

ND = Not detected
mg/kg = milligram(s) per kilogram
Detection Limit (mg/kg) : 10



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RESULTS:

BBP/DBP/DEHP/DnHP/DIDP Phthalates Content Requirements in Toys, Child Care Articles and Watches – California Proposition 65 settlements of County of Sacramento case number 07AS04683, and the Alameda Superior Court case numbers BG07350969, RG08367601, RG07351032 and RG08378050

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

Test Parameter:	BBP	DBP	DEHP	DnHP	DIDP	-
Limit (%):	0.1	0.1	0.1	0.1	0.1	-
Test Item(s)	Result (%)					Conclusion
I001	ND	ND	ND	ND	ND	PASS
I002	ND	ND	ND	ND	ND	PASS
I003	ND	ND	ND	ND	ND	PASS
I004	ND	ND	ND	ND	ND	PASS
I005	ND	ND	ND	ND	ND	PASS
I006	ND	ND	ND	ND	ND	PASS
I007	ND	ND	ND	ND	ND	PASS
I008	ND	ND	ND	ND	ND	PASS
I009	ND	ND	ND	ND	ND	PASS
I010	ND	ND	ND	ND	ND	PASS
I011	ND	ND	0.021	ND	ND	PASS
I013+I014	ND	ND	ND	ND	ND	PASS
I015+I016+I017	ND	ND	ND	ND	ND	PASS
I018+I019+I020	ND	ND	ND	ND	ND	PASS
I021+I022+I023	ND	ND	ND	ND	ND	PASS
I024+I025+I026	ND	ND	ND	ND	ND	PASS
I027	ND	ND	ND	ND	ND	PASS
I028	ND	ND	ND	ND	ND	PASS
I029+I030+I031	ND	ND	ND	ND	ND	PASS
I032+I033+I034	ND	ND	ND	ND	ND	PASS
I035+I036+I037	ND	ND	ND	ND	ND	PASS
I038+I039	ND	ND	ND	ND	ND	PASS
I040+I041+I042	ND	ND	ND	ND	ND	PASS
I043+I044	ND	ND	ND	ND	ND	PASS
I045+I046	ND	0.010	0.019	ND	ND	PASS
I047+I048	ND	ND	ND	ND	ND	PASS
I073	ND	ND	ND	ND	ND	PASS



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RESULTS:

Note / key:

BBP = Butyl benzyl phthalate

DnHP = Di-n-hexyl phthalate

ND = Not detected

mg/kg = milligram(s) per kilogram

Detection Limit (%) : Each 0.005

DBP = Dibutyl phthalate

DIDP = Di-iso-decyl phthalate

% = percent

DEHP = Di(2-ethylhexyl) phthalate

10000 mg/kg = 1 %



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 Standard, "Safety of toys", AS/NZS 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.



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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)	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
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	M
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



RESULTS:

Subclause	Requirement	Result
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
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



RESULTS:

Subclause	Requirement	Result
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
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)	M
4.31.2 b	Wooden toys, toys intended in water and mouth pieces of mouth-actuated toys with magnets or magnetic components	M
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:

Migration of Certain Elements –AS/NZS 8124.3:2012 + A1:2016

Test Method : AS/NZS 8124.3:2012 + A1:2016

Analyte	As	Ba	Cd	Cr	Hg	Pb	Sb	Se
Max. Limit All except Type VIII and XI (mg/kg)	25	1000	75	60	60	90	60	500
Max. Limit Type VIII and XI (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
Test Item(s)	Result (mg/kg)								(g)	
Type I: Coatings										
I001	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I002	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I003	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I004	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I005	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I006	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I007	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I008	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I009	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I010	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I011	ND	ND	ND	ND	ND	ND	ND	ND	0.0258	PASS
Type II: Polymeric materials										
I018	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I019	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I020	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I021	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I022	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I023	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I024	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I025	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I026	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I027	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I028	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I029	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I030	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS



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RESULTS:

Analyte	As	Ba	Cd	Cr	Hg	Pb	Sb	Se	Mass of Trace Amount	Conclusion
Test Item(s)	Result (mg/kg)								(g)	
Type II: Polymeric materials										
I031	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I032	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I033	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I034	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I035	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I036	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I037	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I039	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I040	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I041	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I042	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I043	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I044	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I045	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I046	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I047	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I048	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I084	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
Type IV: Textiles										
I049	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I050	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I051	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I052	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I053	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I054	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I055	ND	ND	ND	ND	ND	ND	34	ND	-	PASS
I074	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
Type VII: Materials intended to leave a trace										
I073	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I075	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I076	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I077	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I078	ND	ND	ND	ND	ND	10	ND	ND	-	PASS
I079	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS



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RESULTS:

Analyte	As	Ba	Cd	Cr	Hg	Pb	Sb	Se	Mass of Trace Amount	Conclusion
Test Item(s)	Result (mg/kg)								(g)	
Type VI: Other materials whether mass coloured or not										
I082	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I083	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
Type III: Paper and paper board										
I085	ND	ND	ND	ND	ND	ND	ND	ND	0.0443	PASS
I086	ND	ND	ND	ND	ND	ND	ND	ND	0.0768	PASS
I087	ND	ND	ND	ND	ND	ND	ND	ND	0.0643	PASS
I088	ND	ND	ND	ND	ND	ND	ND	ND	0.0609	PASS
I089	ND	ND	ND	ND	ND	ND	ND	ND	0.0475	PASS

Note / key:

As = Arsenic

Ba = Barium

Cd = Cadmium

Cr = Chromium

Hg = Mercury

Pb = Lead

Sb = Antimony

Se = Selenium

ND = Not detected

g = gram(s)

% = percent

mg/kg = milligram(s) per kilogram

Detection Limit (mg/kg) :

For Type I to VII, IX & X - As 2.5; Ba 100; Cd 7.5; Each (Cr, Hg, & Sb) 6.0; Pb 9.0; Se 50

For Type VIII & XI - Each (As, Cr & Hg) 2.5; Ba 25; Cd 5.0; Sb 6.0; Pb 9.0; Se 50



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 and SOR/2016-195

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	M
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 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
43	Batteries	M



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-accredited section

**FLAMMABILITY OF CELLULOSE NITRATE
 TOY REGULATIONS , SOR/2011-17 and SOR/2016-195 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:

Heavy Metals Content in Surface Coating – Canada Consumer Product Safety Act - Toys Regulations, SOR/2011-17 Sec. 23 with its Latest Amendment

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	Conclusion
Test Item(s)	Method	Result (mg/kg)							
I001	(T)	-	-	-	ND	ND	-	-	PASS
	(S)	ND	ND	ND	-	-	ND	ND	
I002	(T)	-	-	-	ND	ND	-	-	PASS
	(S)	ND	ND	ND	-	-	ND	ND	
I003	(T)	-	-	-	ND	ND	-	-	PASS
	(S)	ND	ND	ND	-	-	ND	ND	
I004	(T)	-	-	-	ND	ND	-	-	PASS
	(S)	ND	ND	ND	-	-	ND	ND	
I005	(T)	-	-	-	ND	ND	-	-	PASS
	(S)	ND	ND	ND	-	-	ND	ND	
I006	(T)	-	-	-	ND	ND	-	-	PASS
	(S)	ND	ND	ND	-	-	ND	ND	
I007	(T)	-	-	-	ND	ND	-	-	PASS
	(S)	ND	ND	ND	-	-	ND	ND	
I008	(T)	-	-	-	ND	ND	-	-	PASS
	(S)	ND	ND	ND	-	-	ND	ND	
I009	(T)	-	-	-	ND	ND	-	-	PASS
	(S)	ND	ND	ND	-	-	ND	ND	
I010	(T)	-	-	-	ND	ND	-	-	PASS
	(S)	ND	ND	ND	-	-	ND	ND	
I011	(T)	-	-	-	ND	ND	-	-	PASS
	(S)	ND	ND	ND	-	-	ND	ND	
I013+I014	(T)	-	-	-	ND	ND	-	-	PASS
	(S)	ND	ND	ND	-	-	ND	ND	
I015+I016+I017	(T)	-	-	-	ND	ND	-	-	PASS
	(S)	ND	120	ND	-	-	ND	ND	



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RESULTS:

Note / key:

As = Arsenic

Ba = Barium

Cd = Cadmium

Hg = Mercury

Pb = Lead

Sb = Antimony

Se = Selenium

ND = Not detected

T = Total analysis

S = Soluble analysis

mg/kg = milligram(s) per kilogram

Detection Limit (mg/kg) :

Total (Pb 25; Hg 10; Sb 30; As 20; Cd 10; Se 50; Ba 50)

Soluble (Sb 30; As 20; Cd 10; Se 50; Ba 50)



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RESULTS:

**Phthalates Content in Children's Toys and Childcare Articles – Canada Consumer Product Safety Act,
Phthalate Regulations, SOR/2016-188 - BBP / DBP / DEHP Content**

Test Parameter:	BBP	DBP	DEHP	-
Limit (%):	0.1	0.1	0.1	-
Test Item(s)	Result (%)			Conclusion
I027	ND	ND	ND	PASS
I028	ND	ND	ND	PASS
I040+I041+I042	ND	ND	ND	PASS
I043+I044	ND	ND	ND	PASS

Note / key:

BBP = Butyl benzyl phthalate

DBP = Dibutyl phthalate

DEHP = Di(2-ethylhexyl) phthalate

ND = Not detected

% = percent

10000 mg/kg = 1 %

mg/kg = milligram(s) per kilogram

Detection Limit (%) : Each 0.005

**Phthalates Content in Children's Toys and Childcare Articles – Canada Consumer Product Safety Act,
Phthalate Regulations, SOR/2016-188 - DNOP / DINP / DIDP Content**

Test Parameter:	DNOP	DINP	DIDP	-
Limit (%):	0.1	0.1	0.1	-
Test Item(s)	Result (%)			Conclusion
I027	ND	ND	ND	PASS
I028	ND	ND	ND	PASS
I040+I041+I042	ND	ND	ND	PASS
I043+I044	ND	ND	ND	PASS

Note / key:

DNOP = Di-n-octyl phthalate

DINP = Di-iso-nonyl phthalate

DIDP = Di-iso-decyl phthalate

ND = Not detected

% = percent

10000 mg/kg = 1 %

mg/kg = milligram(s) per kilogram

Detection Limit (%) : Each 0.005



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RESULTS:



RESULTS:



END OF REPORT