Test Report No. 7191182156 Report Date: April 04, 2018



Note: This report is issued subject to the Testing and Certification Regulations of the TÜV SÜD Group and the General Terms and Conditions of Business of TÜV SÜD PSB Pte Ltd. In addition, this report is governed by the terms set out

> Choose certainty. Add value.

: THAICOLOR CLAY CO., LTD. / TCC MARKETING CO., LTD.

[FOR EXPORT]

175/1 MOO 1 KAERAI KRATHUMBAN SAMUTHSAKORN,

74110 THAILAND

ATTN: MS. KOTCHAKORN P.

Test Sample RECEIVED ON 13/03/2018

Test Period : FROM 13/03/2018 TO 04/04/2018

Sample Description : SK-TOY BAG SET

Color

Product Type/ End Use

SKU No.:

: EUROPE / USA **Country of Destination**

Country of Origin : THAILAND

Manufacturer : THAICOLOR CLAY CO., LTD.



Model/Style

Client

Laboratory: TÜV SÜD PSB Pte. Ltd. No.1 Science Park Drive Singapore 118221

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Phone: +65-6885 1285 Fax: +65-6776 8670 E-mail: enquiries@tuv-sud-psb.sg

www.tuv-sud-psb.sg Co. Reg: 199002667R Regional Head Office: TÜV SÜD Asia Pacific Pte. Ltd. 1 Science Park Drive, #02-01 Singapore 118221 TÜV®

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SUMMARY OF TEST RESULTS

TEST REQUESTED	CONCLUSION	REMARK
MECHANICAL HAZARDS (EN 71 PART 1)	PASS	EU
FLAMMABILITY (EN 71 PART 2)	PASS	EU
MIGRATION OF CERTAIN ELEMENTS (EN 71 PART 3)	PASS	EU
PHTHALATES CONTENT (DEHP, DBP, BBP, DINP, DIDP, DNOP)	PASS	EU
MECHANICAL HAZARDS (ASTM F963)	PASS	USA
FLAMMABILITY OF SOLIDS	PASS	USA
TOTAL HEAVY METAL CONTENTS (ASTM F963)	PASS	USA
LEAD CONTENT (CPSIA)	PASS	USA
PHTHALATES CONTENT (CPSIA)	PASS	USA

For any concern or technical Inquiries, please contact

SUZEN CHONG VICE PRESIDENT

ASEAN - SOFTLINE & HARDLINE

Tel: +65 8686 6196

Email: suzen.chong@tuv-sud-psb.sg

APPROVED BY:

KOO CHIEH VOON

HARDLINE PRODUCT MANAGER

Report Date: April 04, 2018



TEST RESULT(S):

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

Subclause	Requirement	Result
4.1	Material cleanliness	М
4.2	Assembly	NA
4.3	Flexible plastic sheeting	NA
4.4	Toy Bags	NA
4.5	Glass	NA
4.6	Expanding materials	NA
4.7 & 7.6	Edges	M
4.8 & 7.6	Points and metallic wires	NA
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	1
4.15.1.2 & 7.10.1 & 7.10.2 & 7.10.3 & 7.10.4 & 7.16	Toys propelled by child – Instructions for use	NA
4.15.1.3	Toys propelled by child – Strength	NA
4.15.1.4	Toys propelled by child – Stability	NA
4.15.1.5	Toys propelled by child – Braking	NA
4.15.1.6	Toys propelled by child - Transmission	NA
4.15.1.7	Toys propelled by child – insertion mark	NA
4.15.1.8	Electrically-driven ride-on toys	NA
4.15.2	Toy bicycles	
4.15.2.2 & 7.15	Toy bicycles – Warnings and instructions for use	NA
4.15.2.3	Toy bicycles – Braking	NA
4.15.3 & 7.16 & 7.19	Rocking horses and similar toys	NA
4.15.4 & 7.16	Toys not propelled by child	NA
4.15.5 & 7.18	Toy scooters	NA
4.16	Heavy immobile toys	NA
4.17.1	Projectiles – General	NA
4.17.2	Projectiles toys without stored energy	NA
4.17.3 & 7.7	Projectile toys with stored energy	NA
4.17.4 & 7.7	Bows and arrows	NA
4.18 & 7.4	Aquatic toys and inflatable toys	NA
4.19 & 7.13 & 7.14	Percussion caps	NA
*4.20.2.1- 4.20.2.8, 4.20.2.10, 4.20.2.12	Acoustics	NA

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

Subclause	Requirement	Result
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	I
4.23.2 a, b & c	Toy other than magnetic / electrical experimental sets intended for children over 8 years	NA
4.23.3 & 7.20	Magnetic / electrical experimental sets intended for children over 8 years	NA
4.24	Yo-yo ball	NA
4.25	Toys attached to food	NA
	FOR TOYS INTENDED FOR CHILDREN UNDER 36 MONTHS	
5	Cleaning instruction for item intended for child under 3 years of age	NA
5.1	General	NA
5.1a	Small parts – as received	NA
5.1b	Small parts, sharp points, sharp edges – after tests	NA
5.1c	Cross section <2mm metal points & wires	NA
5.1e	Toys contain glue	NA
5.1f	Casing of toys	NA
5.2	Fillings, coverings and seams	NA
5.3	Adhesion of plastic sheeting	NA
5.4 &	Cords on toys	NA
5.4(a)	Cords connected to self-retraction mechanism or in pull along toys	NA
5.4(b) & 7.22	Cords and chains that can form tangled loop or noose	NA
5.4(c) & 7.22	Fixed loop of cords or chains	NA
5.4(d)	Nooses	NA
5.4(e)	Self-retraction mechanism	NA
5.4(f) & 7.11	Toy across cradle, cot or perambulator	NA
5.4(g) & 7.22	Cords and chains with free end (exclude pull along toy)	NA
5.4(h)	Cords and chains with free end on pull along toy	NA
5.4(i) & 7.21	Electrical cables	NA
5.5 & 7.12	Liquid filled toys	NA NA
5.6	Electrically driven toys	NA
5.7	Glass and porcelain	NA NA
5.8	Shape and size	NA NA
5.9 & 7.17	Monofilament fibres	NA NA
5.10	Small balls	NA
5.11	Play figures	NA NA
5.12	Hemispheric shaped toys	NA NA
5.13	Suction cups	NA NA
5.14	Straps intended to be worn fully or partially around the neck	NA NA
6	Packaging	NR
0	WARNINGS, INSTRUCTIONS FOR USE	INIX
7	CE Mark	NR
7 7		
	Manufacturer name and address	NR NB
7 7	Importer name and address Product Identification	NR NB
	Product Identification	NR NB
7.1	General Taylo not intended for children under 26 months	NR
7.2	Toys not intended for children under 36 months	NR

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

Subclause	Requirement	Result
7.5	Functional toys	NR

M = Meet NM = Not Meet NA = Not Applicable R = Refer to Comment Section NR = Not Request NT = Not Tested NP = Not Presented

REQUIREMENTS & TEST METHODS CROSS REFERENCE TABLE FOR PART 1

							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				

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TEST RESULT(S): (Continued)

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

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

REQUIREMENTS & TEST METHODS CROSS REFERENCE TABLE FOR PART 2

Sub- clause	Test Method	Sub- clause	Test Method	Sub- clause	Test Method	Sub- clause	Test Method
4.2.2	5.2	4.2.4	5.3	4.3	5.4	4.5	5.5
4.2.3	5.3	4.2.5	5.4	4.4	5.4	14	-

M = Meet NM = Not Meet NA = Not Applicable R = Refer to Comment Section NR = Not Request NT = Not Tested NP = Not Presented

Remark:

- The burn rate limitation is 30 mm/sec.

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TEST RESULT(S): (Continued)

Migration of Certain Elements - European Standard EN 71 Part 3: 2013 with Amendment A2: 2017

Test Method : European Standard EN 71 Part 3: 2013 with Amendment A2: 2017, Section 8.

See Soluble Element	Type I	Dry, brittle, powder-like or pliable toy material
(Parameter) and its corresponding Maximum	Type II	Liquid or sticky toy material
Allowable Limit (Req.) in Result Table	Type III	Scraped-off toy material

Test Item(s)	Item / Component Description(s)
1	Black + Orange + Transparent Orange PP
2	Pink + Transparent Pink + Red PP
3	Yellow + Transparent Yellow + White PP
4	Light Blue + Dark Blue + Pale Blue PP
5	Transparent Blue + Transparent Yellow PP
6	Green + Transparent Green PP
7	Yellow + Red + Green ABS
8	Blue + White + Purple ABS
9	Pink + Orange + Peach ABS
10	Blue + Yellow + Red Hi-Impact
11	Green + Pink Hi-Impact
12	Transparent Plastic
13	Black + Dark Blue + White coating
14	Light Orange + Yellow + Orange coating
15	Blue + Light Blue + Brown coating
16	Light Brown + Sky Blue + Green Coating



-	Unit	Req.			Result		
Test Item(s)	-	-	1	2	3	4	5
Туре	-	-	III	III	III	III	III
Parameter	-	-	-	-	-	-	-
Mass of Trace Amount	g	-	-	-	-	-	-
Aluminium (Al)	mg/kg	70000	ND	ND	ND	ND	ND
Antimony (Sb)	mg/kg	560	ND	ND	ND	ND	ND
Arsenic (As)	mg/kg	47	ND	ND	ND	ND	ND
Barium (Ba)	mg/kg	18750	ND	ND	ND	ND	ND
Boron (B)	mg/kg	15000	ND	ND	ND	ND	ND
Cadmium (Cd)	mg/kg	17	ND	ND	ND	ND	ND
Chromium III (Cr III)	mg/kg	460	ND	ND	ND	ND	ND
Chromium VI (Cr VI)	mg/kg	0.2	ND	ND	ND	ND	ND
Cobalt (Co)	mg/kg	130	ND	ND	ND	ND	ND
Copper (Cu)	mg/kg	7700	ND	ND	ND	ND	ND
Lead (Pb)	mg/kg	160	ND	ND	ND	ND	ND
Manganese (Mn)	mg/kg	15000	ND	ND	ND	ND	ND
Mercury (Hg)	mg/kg	94	ND	ND	ND	ND	ND
Nickel (Ni)	mg/kg	930	ND	ND	ND	ND	ND
Selenium (Se)	mg/kg	460	ND	ND	ND	ND	ND
Strontium (Sr)	mg/kg	56000	ND	ND	ND	ND	ND
Tin (Sn)	mg/kg	180000	ND	ND	ND	ND	ND
Organic tin	mg/kg	12	ND	ND	ND	ND	ND
Zinc (Zn)	mg/kg	46000	ND	ND	ND	ND	ND
Conclusion			PASS	PASS	PASS	PASS	PASS



-	Unit	Req.			Result		
Test Item(s)	-	-	6	7	8	9	10
Туре	-	-	III	III	III	III	III
Parameter	-	-	-	-	-	-	-
Mass of Trace Amount	g	-	-	-	-	-	-
Aluminium (Al)	mg/kg	70000	ND	ND	ND	ND	ND
Antimony (Sb)	mg/kg	560	ND	ND	ND	ND	ND
Arsenic (As)	mg/kg	47	ND	ND	ND	ND	ND
Barium (Ba)	mg/kg	18750	ND	ND	ND	ND	ND
Boron (B)	mg/kg	15000	ND	ND	ND	ND	ND
Cadmium (Cd)	mg/kg	17	ND	ND	ND	ND	ND
Chromium III (Cr III)	mg/kg	460	ND	ND	ND	ND	ND
Chromium VI (Cr VI)	mg/kg	0.2	ND	ND	ND	ND	ND
Cobalt (Co)	mg/kg	130	ND	ND	ND	ND	ND
Copper (Cu)	mg/kg	7700	ND	2.0	ND	ND	2.2
Lead (Pb)	mg/kg	160	ND	ND	ND	ND	ND
Manganese (Mn)	mg/kg	15000	ND	ND	ND	ND	ND
Mercury (Hg)	mg/kg	94	ND	ND	ND	ND	ND
Nickel (Ni)	mg/kg	930	ND	ND	ND	ND	ND
Selenium (Se)	mg/kg	460	ND	ND	ND	ND	ND
Strontium (Sr)	mg/kg	56000	ND	ND	ND	ND	ND
Tin (Sn)	mg/kg	180000	ND	ND	ND	ND	ND
Organic tin	mg/kg	12	ND	ND	ND	ND	ND
Zinc (Zn)	mg/kg	46000	ND	3.2	ND	ND	3.6
Conclusion		-	PASS	PASS	PASS	PASS	PASS



-	Unit	Req.			Result		
Test Item(s)	-	-	11	12	13	14	15
Туре		-	Ш	III	III	III	III
Parameter	-	-	-	-	-	-	-
Mass of Trace Amount	g	-	-	-	-	-	-
Aluminium (Al)	mg/kg	70000	ND	ND	ND	ND	ND
Antimony (Sb)	mg/kg	560	ND	ND	ND	ND	ND
Arsenic (As)	mg/kg	47	ND	ND	ND	ND	ND
Barium (Ba)	mg/kg	18750	ND	ND	ND	ND	ND
Boron (B)	mg/kg	15000	ND	ND	ND	ND	ND
Cadmium (Cd)	mg/kg	17	ND	ND	ND	ND	ND
Chromium III (Cr III)	mg/kg	460	ND	ND	ND	ND	ND
Chromium VI (Cr VI)	mg/kg	0.2	ND	ND	ND	ND	ND
Cobalt (Co)	mg/kg	130	ND	ND	ND	ND	ND
Copper (Cu)	mg/kg	7700	ND	ND	ND	ND	ND
Lead (Pb)	mg/kg	160	ND	ND	ND	ND	ND
Manganese (Mn)	mg/kg	15000	ND	ND	ND	ND	ND
Mercury (Hg)	mg/kg	94	ND	ND	ND	ND	ND
Nickel (Ni)	mg/kg	930	ND	ND	ND	ND	ND
Selenium (Se)	mg/kg	460	ND	ND	ND	ND	ND
Strontium (Sr)	mg/kg	56000	ND	ND	ND ND	ND	ND
Tin (Sn)	mg/kg	180000	ND	ND	ND	ND	ND
Organic tin	mg/kg	12	ND	ND	ND	ND	ND
Zinc (Zn)	mg/kg	46000	ND	ND	ND	ND	ND
Conclusion	1	- 1	PASS	PASS	PASS	PASS	PASS

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-	Unit	Req.	Result
Test Item(s)	-	-	16
Туре	-	-	III
Parameter	-	-	-
Mass of Trace Amount	g	-	-
Aluminium (Al)	mg/kg	70000	ND
Antimony (Sb)	mg/kg	560	ND
Arsenic (As)	mg/kg	47	ND
Barium (Ba)	mg/kg	18750	ND
Boron (B)	mg/kg	15000	ND
Cadmium (Cd)	mg/kg	17	ND
Chromium III (Cr III)	mg/kg	460	ND
Chromium VI (Cr VI)	mg/kg	0.2	ND
Cobalt (Co)	mg/kg	130	ND
Copper (Cu)	mg/kg	7700	ND
Lead (Pb)	mg/kg	160	ND
Manganese (Mn)	mg/kg	15000	ND
Mercury (Hg)	mg/kg	94	ND
Nickel (Ni)	mg/kg	930	ND
Selenium (Se)	mg/kg	460	ND
Strontium (Sr)	mg/kg	56000	ND
Tin (Sn)	mg/kg	180000	ND
Organic tin	mg/kg	12	ND
Zinc (Zn)	mg/kg	46000	ND
Conclusion		-	PASS

Note / Key:

 $\begin{array}{ll} \text{ND = Not detected} & \text{``>" = Greater than} & \text{Req. = Requirement} \\ \text{NR = Not requested} & \text{g = gram(s)} & \text{INCON. = Inconclusive} \\ \end{array}$

mg/kg = milligram(s) per kilogram = ppm = part(s) per million
[] = Detection Limit by In House Ion Chromatography Analysis

{} = Detection Limit by test method with reference to EN 71 Part 3: 2013 with Amendment A2: 2017, Annex G

Detection Limit (mg/kg):

For Type I and Type II - Each (As, Cd, Cr III and Hg): 0.15; Cr VI: 0.005 [0.002]; Organic tin: 0.04;

Pb: 0.5; Each (Others): 2

For Type III - Cr III: 0.15; Cr VI: 0.15 [0.002]; Each (Others): 2

Remark:

- Results of Cr III and Cr VI were reported as sum of soluble chromium content unless further verified.
- Result(s) of organic tin was (were) calculated by assuming the soluble tin content was wholly contributed from tributyltin (TBT) cation unless further specified.

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TEST RESULT(S): (Continued)

Phthalates Content in Toys and Childcare Articles - European Regulation (EC) No. 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) with Amendments up to EC No. 494/2011, Annex XVII, Entry 51

Test Item(s)	Item / Component Description(s)			
1	Black + Orange + Transparent Orange PP			
2	Pink + Transparent Pink + Red PP			
3	Yellow + Transparent Yellow + White PP			
4	Light Blue + Dark Blue + Pale Blue PP			
5	Transparent Blue + Transparent Yellow PP			
6	Green + Transparent Green PP			
7	Yellow + Red + Green ABS			
8	Blue + White + Purple ABS			
9	Pink + Orange + Peach ABS			
10	Blue + Yellow + Red Hi-Impact			
11	Green + Pink Hi-Impact			
12	Transparent Plastic			
13	Black + Dark Blue + White coating			
14	Light Orange + Yellow + Orange coating			
15	Blue + Light Blue + Brown coating			
16	Light Brown + Sky Blue + Green Coating			

Maximum Allowable Limit :	0.1 % (Sum of all listed phthalates)

Tootod Hom/o)	Result	Conclusion			
Tested Item(s)	Detected Analyte(s)	Conc.	Unit	Conclusion	
1	ND	ND	%	PASS	
2	ND	ND	%	PASS	
3	ND	ND	%	PASS	
4	DEHP	0.008	%	PASS	
5	ND	ND	%	PASS	
6	ND	ND	%	PASS	
7	ND	ND	%	PASS	
8	ND	ND	%	PASS	
9	ND	ND	%	PASS	
10	ND	ND	%	PASS	
11	ND	ND	%	PASS	
12	ND	ND	%	PASS	
13	ND	ND	%	PASS	
14	ND	ND	%	PASS	
15	ND	ND	%	PASS	
16	ND	ND	%	PASS	

Note / Key:

ND = Not detected ">" = Greater than Conc. = Concentration

% = percent 1 % = 10 000 mg/kg mg/kg = milligram(s) per kilogram = ppm = part(s) per million

Detection Limit (%): Each 0.005

Remark:

- The list of phthalates is summarized in table of Appendix.

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APPENDIX

List	List of Phthalates [European Regulation EC No. 1907/2006, Annex XVII, Entry 51]:						
No.	Name of Analytes	CAS-No. [EC No.]	No.	Name of Analytes	CAS-No. [EC No.]		
1	Butyl benzyl phthalate (BBP)	85-68-7 [201-622-7]	4	Di-iso-nonyl phthalate (DINP)	28553-12-0 & 68515- 48-0 [249-079-5 & 271- 090-9]		
2	Dibutyl phthalate (DBP)	84-74-2 [201-557-4]	5	Di-n-octyl phthalate (DNOP)	117-84-0 [204-214-7]		
3	Di-2-ethylhexyl phthalate (DEHP)	117-81-7 [204-211-0]	6	Di-iso-decyl phthalate (DIDP)	26761-40-0 & 68515- 49-1 [247-977-1 & 271- 091-4]		



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TEST RESULT(S): (Continued)

PHYSICAL AND MECHANICAL HAZARDS (ASTM F963-17)

Subclause	Requirement	Result
4.1	Material Quality	M
4.3.7	Stuffing Materials	NA
4.5	Sound-Producing Toys	NA
4.6	Small Objects	NA
4.7	Accessible Edges	M
4.8	Projections	NA
4.9	Accessible Points	M
4.10	Wires and Rods	NA
4.11	Nails and Fasteners	NA
4.12	Plastic Film	NA
4.13	Folding Mechanisms and Hinges	NA
4.14	Cords, Straps and Elastics	NA
4.15	Stability and Over-Load Requirements	NA
4.16	Confined Spaces	NA
4.17	Wheels, Tires and Axles	NA
4.18	Holes, Clearances and Accessibility of Mechanisms	NA
4.19	Simulated Protective Devices	NA
4.20	Pacifiers	NA
4.21	Projectile Toys	NA
4.22	Teethers and Teething Toys	NA
4.23	Rattles	NA
4.24	Squeeze Toys	NA
4.25	Battery-Operated Toys (exclude section 4.25.10 Battery-powered ride-on toys)	NA
4.26	Toys intended to be Attached to a Crib or Playpen	NA
4.27	Stuffed and Beanbag-Type Toys	NA
4.30	Toy Gun Marking	NA
4.32	Certain Toys with Nearly Spherical Ends	NA
4.34	Small Balls	NA
4.35	Pompoms	NA
4.36	Hemispheric-Shaped Objects	NA
4.37	Yo Yo Elastic Tether Toys	NA
4.38	Magnets	NA
4.39	Jaw Entrapment in Handles and Steering Wheels	NA
4.40	Expanding materials	NA
5.2	Age Grading Labeling	NR
5.4 & 5.3	Aquatic Toys	NA
5.5 & 5.3	Crib and Playpen Toys	NA
5.6 & 5.3	Mobiles	NA
5.7 & 5.3	Stroller and Carriage Toys	NA

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PHYSICAL AND MECHANICAL HAZARDS (ASTM F963-17)

Subclause	Requirement	Result	
5.8 & 5.3	Toys Intended to be Assembled by an Adult	NA	
5.9 & 5.3	Simulated Protective Devices	NA	
5.10 & 5.3	Toys with Functional Sharp Edges or Sharp Points	NA	
5.11	Small Objects, Small Balls, Marbles and Balloons (16 CFR 1500.19)	NA	
5.12	Toy Caps (16 CFR 1500.86)	NA	
5.13	Art Materials (16 CFR 1500.14(b)(8))	NA	
5.15	Battery-Operated Toyss (exclude 5.15.1)	NA	
5.15.1 & 5.3	Battery-Powered Ride-On Toys	NA	
5.15.2 & 5.3	Button or coin cell batteries	NA	
5.16	Promotional Materials	NA	
5.17 & 5.3	Magnets	NA	
6.1	Definition and Description	NA	
6.2	Crib and Playpen Toys	NA	
6.3	Mobiles	NA	
6.4 & 5.3	Toys Intended to be Assembled by an Adult	NA	
6.5	Battery-Operated Toys	NA	
6.6	Battery-Powered Ride-On Toys		
6.7	Toys in Contact with Food	NA	
7.1	Producer's Name and Address	NA	
7.2	Battery-Powered Ride-On Toys	NA	

M = Meet NM = Not Meet NA = Not Applicable R = Refer to Comment Section NR = Not Request NT = Not Tested NP = Not Presented

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TEST RESULT(S): (Continued)

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

1 EAMINABLE 11 (10 01 11 020 110 11 1000 10 (0)(0)(1))					
Requirement	Test Method Reference	Result			
Burn rate no greater than 0.1 of an inch per second	16 CFR 1500.44	PASS			



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TEST RESULT(S): (Continued)

Total Heavy Metals Content - Initial Screening of ASTM International Standard ASTM F963-17, Section 4.3.5.1(2) for Soluble Heavy Metals Content in Surface Coating

Test Method: ASTM International Standard ASTM F963-17, Section 8.3.1 and Annex A7.

Test Item(s)	Item / Component Description(s)			
1	Black + Dark Blue + White Coating			
2	Light Orange + Yellow + Orange Coating			
3	Blue + Light Blue + Brown Coating			
4	Light Brown + Sky Blue + Green Coating			

Total Element(s)	As	Ва	Cd	Cr	Hg	Pb	Sb	Se
Maximum Allowable Limit (mg/kg)	25	1 000	75	60	60	90	60	500

		and the same of th	NO. 2 & AM. Designa.				
-	Unit	11 6	Result				
Test Item(s)	1	1 0	2	3	4		
Parameter	-/-	- 1	- 7/	7//	-		
Total Arsenic (As)	mg/kg	ND	ND	ND	ND		
Total Barium (Ba)	mg/kg	ND	ND	ND	ND		
Total Cadmium (Cd)	mg/kg	ND	ND	ND	ND		
Total Chromium (Cr)	mg/kg	ND	ND	ND	ND		
Total Mercury (Hg)	mg/kg	ND	ND	ND	ND		
Total Lead (Pb)	mg/kg	ND	ND	ND	ND		
Total Antimony (Sb)	mg/kg	ND	ND	ND	ND		
Total Selenium (Se)	mg/kg	ND	ND	ND	ND		
Conclusion	-	PASS	PASS	PASS	PASS		

Note / Key:

ND = Not detected ">" = Greater than NR = Not requested % = percent mg/kg = milligram(s) per kilogram = ppm = part(s) per million Detection Limit (mg/kg) - As : 10 ; Ba : 40 ; Cd : 20 ; Cr : 10 ; Hg : 10 ; Pb : 20 ; Sb : 20 ; Se : 40

Remark:

- Test Item(s) with total heavy metals content in surface coating exceeding 80 % of this maximum allowable limit based on the lowest weight component or this maximum allowable limit should be considered as data and further tested by soluble heavy metals analysis of ASTM International Standard ASTM F963-17, Sections 8.3.2 to 8.3.4 as specified in Section 8.3.1.3.
- Test Item(s) with total lead content in surface coating exceeding this maximum allowable limit should be retained as fail and not required to be further tested by soluble heavy metals analysis of ASTM International Standard ASTM F963-17, Sections 8.3.2 to 8.3.4 as specified in Section 8.3.1.3.
- Although the Test Item(s) 1, 2, 3 & 4 complies with the above requirement, it is possible that, if tested separately, one or more of the constituents of this (these) Test Item(s) may not comply with this requirement. Separate testing on this (these) Test Item(s) is recommended to discern the failed constituent(s).





Report Date: April 04, 2018



TEST RESULT(S): (Continued)

Total Heavy Metals Content - Initial Screening of ASTM International Standard ASTM F963-17, Section 4.3.5.2(2)(b) for Soluble Heavy Metals Content in Substrate

Test Method: ASTM International Standard ASTM F963-17, Section 8.3.1 and Annex A7.

Test Item(s)	Item / Component Description(s)
1	Black + Orange + Transparent Orange PP
2	Pink + Transparent Pink + Red PP
3	Yellow + Transparent Yellow + White PP
4	Light Blue + Dark Blue + Pale Blue PP
5	Transparent Blue + Transparent Yellow PP
6	Green + Transparent Green PP
7	Yellow + Red + Green ABS
8	Blue + White + Purple ABS
9	Pink + Orange + Peach ABS
10	Blue + Yellow + Red Hi-Impact
11	Green + Pink Hi-Impact
12	Transparent Plastic

Total Element(s)	As	Ва	Cd	Cr	Hg	Pb	Sb	Se
Maximum Allowable Limit (mg/kg)	25	1 000	75	60	60	90	60	500
	- 6	311	1.3	- 10				

-	Unit		UU	Res	sult	11	
Test Item(s)	-//	1	2	3	4	5	6
Parameter	- //	-	-	-	-//	-	-
Total Arsenic (As)	mg/kg	ND	ND	ND	ND	ND	ND
Total Barium (Ba)	mg/kg	ND	ND	ND	ND	ND	ND
Total Cadmium (Cd)	mg/kg	ND	ND	ND	ND	ND	ND
Total Chromium (Cr)	mg/kg	ND	ND	ND	ND	ND	ND
Total Mercury (Hg)	mg/kg	ND	ND	ND	ND	ND	ND
Total Lead (Pb)	mg/kg	ND	ND	ND	ND	ND	ND
Total Antimony (Sb)	mg/kg	ND	ND	ND	ND	ND	ND
Total Selenium (Se)	mg/kg	ND	ND	ND	ND	ND	ND
Conclusion	-	PASS	PASS	PASS	PASS	PASS	PASS

-	Unit		Result				
Test Item(s)	-	7	8	9	10	11	12
Parameter	-	-	-	-	-	-	-
Total Arsenic (As)	mg/kg	ND	ND	ND	ND	ND	ND
Total Barium (Ba)	mg/kg	ND	ND	ND	ND	ND	ND
Total Cadmium (Cd)	mg/kg	ND	ND	ND	ND	ND	ND
Total Chromium (Cr)	mg/kg	ND	ND	ND	ND	ND	ND
Total Mercury (Hg)	mg/kg	ND	ND	ND	ND	ND	ND
Total Lead (Pb)	mg/kg	ND	ND	ND	ND	ND	ND
Total Antimony (Sb)	mg/kg	ND	ND	ND	ND	ND	ND
Total Selenium (Se)	mg/kg	ND	ND	ND	ND	ND	ND
Conclusion	-	PASS	PASS	PASS	PASS	PASS	PASS

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Note / Key:

ND = Not detected ">" = Greater than NR = Not requested % = percent mg/kg = milligram(s) per kilogram = ppm = part(s) per million

Detection Limit (mg/kg):

For Nonmetallic material(s) - As : 16; Ba : 10; Cd : 10; Cr : 10; Hg : 10; Pb : 10; Sb : 30; Se : 50 For Metallic material(s) - As : 10; Ba : 50; Cd : 10; Cr : 10; Hg : 10; Pb : 10; Sb : 20; Se : 50

Remark:

- Test Item(s) with total heavy metals content (Except for total lead content) in substrate exceeding 80 % of this maximum allowable limit based on the lowest weight component or this maximum allowable limit should be considered as data and further tested by soluble heavy metals analysis of ASTM International Standard ASTM F963-17, Section 8.3.5 (Excluding 8.3.5.5(3)) as specified in Section 8.3.1.3.
- Test Item(s) with total lead content in substrate exceeding this maximum allowable limit should be retained as fail and not required to be further tested by soluble heavy metals analysis of ASTM International Standard ASTM F963-17, Section 8.3.5 (Excluding 8.3.5.5(3)) as specified in Section 8.3.1.3.
- Although the Test Item(s) 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 & 11 complies with the above requirement, it is possible that, if tested separately, one or more of the constituents of this (these) Test Item(s) may not comply with this requirement. Separate testing on this (these) Test Item(s) is recommended to discern the failed constituent(s).

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TEST RESULT(S): (Continued)

Total Lead Content in Surface Coating - United States Consumer Product Safety Improvement Act (CPSIA) of 2008, Section 101(a)(2) / United States Code of Federal Regulations (CFR), Title 16, Part 1303

Test Method : U. S. CPSC-CH-E1003-09.1 (February 25, 2011).

Test Item(s)	Item / Component Description(s)					
1	Black + Dark Blue + White Coating					
2	Light Orange + Yellow + Orange Coating					
3	Blue + Light Blue + Brown Coating					
4	Light Brown + Sky Blue + Green Coating					

-	Unit	-	Re	sult	
Test Item(s)	-	1	2	3	4
Parameter	-	-		-	-
Total Lead (Pb)	mg/kg	ND	ND	ND	ND
Conclusion	-	PASS	PASS	PASS	PASS

Note / Key:

ND = Not detected ">" = Greater than

mg/kg = milligram(s) per kilogram = ppm = part(s) per million U. S. = United States

90 mg/kg

10 000 mg/kg = 1 % % = percent

Potential Total Lead (Pb) = Estimated total lead content per component is based on calculation by

component individual weight

Detection Limit (mg/kg): 10

Maximum Allowable Limit:

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TEST RESULT(S): (Continued)

Total Lead Content in Substrate - United States Consumer Product Safety Improvement Act (CPSIA) Section 101(a)(2)

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

2010).

Test Item(s)	Item / Component Description(s)
1	Black + Orange + Transparent Orange PP
2	Pink + Transparent Pink + Red PP
3	Yellow + Transparent Yellow + White PP
4	Light Blue + Dark Blue + Pale Blue PP
5	Transparent Blue + Transparent Yellow PP
6	Green + Transparent Green PP
7	Yellow + Red + Green ABS
8	Blue + White + Purple ABS
9	Pink + Orange + Peach ABS
10	Blue + Yellow + Red Hi-Impact
11	Green + Pink Hi-Impact
12	Transparent Plastic

Maximum Allowable Limit :	100 mg/kg
	OF ID

- 13	Unit	Result					
Test Item(s)		1	2	3	4	5	6
Total Lead (Pb)	mg/kg	ND	ND	ND	ND	ND	ND
Conclusion	- 1	PASS	PASS	PASS	PASS	PASS	PASS

-	Unit	Result					
Test Item(s)	-	7	8	9	10	11	12
Total Lead (Pb)	mg/kg	ND	ND	ND	ND	ND	ND
Conclusion	-	PASS	PASS	PASS	PASS	PASS	PASS

Note / Key:

ND = Not detected ">" = Greater than mg/kg = milligram(s) per kilogram = ppm = part(s) per million

10000 mg/kg = 1 % % = percent

Detection Limit (mg/kg): 10

Report Date: April 04, 2018



TEST RESULT(S): (Continued)

Phthalates Content in Children's Toys and Child Care Articles - United States Code of Federal Regulations (CFR), Title 16, Part 1307 and United States Consumer Product Safety Improvement Act (CPSIA) of 2008, Sections 108(a) and 108(b)(3)

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

Test Item(s)	Item / Component Description(s)
1	Black + Orange + Transparent Orange PP
2	Pink + Transparent Pink + Red PP
3	Yellow + Transparent Yellow + White PP
4	Light Blue + Dark Blue + Pale Blue PP
5	Transparent Blue + Transparent Yellow PP
6	Green + Transparent Green PP
7	Yellow + Red + Green ABS
8	Blue + White + Purple ABS
9	Pink + Orange + Peach ABS
10	Blue + Yellow + Red Hi-Impact
11	Green + Pink Hi-Impact
12	Transparent Plastic
13	Black + Dark Blue + White coating
14	Light Orange + Yellow + Orange coating
15	Blue + Light Blue + Brown coating
16	Light Brown + Sky Blue + Green Coating

Maximum Allowable Limit :	0.1 % (Each of all listed phthalates) [b]
------------------------------	---

Tacted Hom/s)	Result		Conclusion		
Tested Item(s)	Detected Analyte(s)	Conc.	Unit	Conclusion	
1	ND	ND	%	PASS	
2	ND	ND	%	PASS	
3	ND	ND	%	PASS	
4	DEHP	0.008	%	PASS	
5	ND	ND	%	PASS	
6	ND	ND	%	PASS	
7	ND	ND	%	PASS	
8	ND	ND	%	PASS	
9	ND	ND	%	PASS	
10	ND	ND	%	PASS	
11	ND	ND	%	PASS	
12	ND	ND	%	PASS	
13	ND	ND	%	PASS	
14	ND	ND	%	PASS	
15	ND	ND	%	PASS	
16	ND	ND	%	PASS	

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Note / Key:

ND = Not detected ">" = Greater than Conc. = Concentration

% = percent 1 % = 10 000 mg/kg

U. S. CPSC = United States Consumer Product Safety Commission mg/kg = milligram(s) per kilogram = ppm = part(s) per million Detection Limit (%) : Each of the listed phthalates : 0.005

Remark:

- The list of phthalates is summarized in table of Appendix.

- Accessible plastic materials (Including natural and synthetic rubber), plasticizer print, scrapable surface coatings, decals, unscrapable polymeric coated materials, adhesives and sealants, toy nail polish, reusable packaging, electrical plug and cables of children's toys and childcare articles are applicable to be tested with the exclusion for adhesive for stickers and the materials listed below:
 - (i) Polypropylene (PP);
 - (ii) Polyethylene (PE),
 - (iii) Acrylonitrile butadiene styrene (ABS);
 - (iv) General purpose polystyrene (GPPS);
 - (v) Medium-impact polystyrene (MIPS);
 - (vi) High-impact polystyrene (HIPS);
 - (vii) Super high-impact polystyrene (SHIPS); and

Their additives as listed in United States Code of Federal Regulations (CFR), Title 16, Part 1308.

- [b] denotes as this maximum allowable limit applies to product(s) manufactured and imported on or after April 25, 2018.
- If no or unacceptable documentation, like Bill of Materials (BOM) or material identification, is provided by client, phthalate test(s) is (are) required to conduct on all plastic materials.
- Vendor is responsible for the compliance of other accessible materials, including additives in the exempt plastic materials, which are not tested.

APPENDIX

List of Phthalates [U. S. 16 CFR 1307 and U. S. CPSIA of 2008, Sections 108(a) and 108(b)(3)]:					
No.	Name of Analyte(s)	CAS-No.	No.	Name of Analyte(s)	CAS-No.
1	Butyl benzyl phthalate (BBP)	85-68-7	5	Di-iso-butyl phthalate (DIBP)	84-69-5
2	Dibutyl phthalate (DBP)	84-74-2	6	Di-n-pentyl phthalate (DnPP or DPENP)	131-18-0
3	Di-2-ethylhexyl phthalate (DEHP)	117-81-7	7	Di-n-hexyl phthalate (DnHP or DHEXP)	84-75-3
4	Di-iso-nonyl phthalate (DINP)	28553-12-0	8	Di-cyclohexyl phthalate (DCHP)	84-61-7

CAS-No. = Chemical Abstracts Service registry number

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