TEST REPORT

MID OCEAN BRANDS B.V.

Technical Report: **(3224)319-0296** Dec.02,2024
Date Received: Nov.14,2024 Page 1 of 17

MID OCEAN BRANDS B.V.
7/F.,KINGS TOWEER,111 KING LAM STREET,CHEUNG SHA WAN,KWLOON,HONG KONG

SAMPLE INFORMATION:

Sample Description:	PENCIL CASE SET	**Sample Quantity:**	N/A
Vendor:	111041	**Style No(s):**	MO2505
Manufacturer:	N/A	**SKN/SKU No.:**	N/A
Buyer:	N/A	**PO No.:**	N/A
Labeled Age Grade:	NOT PROVIDED	**Ref #:**	N/A
Appropriate Age Grade:	N/A	**Country of Origin:**	CHINA
Client Specified Age Grade:	OVER 3 YEARS OF AGE	**Assortment No.:**	N/A
Tested Age Grade:	OVER 3 YEARS OF AGE	**Country of Destination:**	EUROPE
UPC Code:	N/A	**Color :**	N/A

EXECUTIVE SUMMARY:

TEST REQUESTED	CONCLUSION
The mechanical and physical properties requirements of the tested subclauses of the European Standard, “Safety of toys”, EN71: Part 1:2014+A1:2018, clauses 1-7.	PASS SEE NOTE 2&3
The flammability requirements of the European Standard "Safety of Toys", EN 71: Part 2: 2020	PASS
Aromatic Amines Content from Azo Colorants - Regulation (EC) No. 1907/2006 Annex XVII Entry 43, Points 1 & 2	PASS
Polycyclic Aromatic Hydrocarbons (PAHs) Content – Regulation (EC) No. 1907/2006 Annex XVII Entry 50, Point 5	PASS
Phthalates Content – Reference to regulation (EC) No. 1907/2006 Annex XVII Entry 51 & 52	PASS
Total Cadmium Content in Plastic Material - European Parliament and Council Regulation (EC) No. 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) with its Latest Amendment, Entry 23	PASS
Total Cd Content	PASS
Migration of Certain Elements - EN71-3:2019+A1:2021	PASS
Benzene Content in Toys or Parts of Toys - European Regulation (EC) No. 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) with Amendment up to EU No. 412/2012, Annex XVII, Entry 5, Point 1	PASS
COLOURFASTNESS TO RUBBING	PASS

Note:
1. The sample is tested as “OVER 3 YEARS OF AGE” per the client’s request .
2. No relevant packaging was provided with the submitted sample(s), consequently, evaluation of the labeling requirements of this European Standard, “Safety of toys”, EN71: Part 1:2014+A1:2018, clauses 7, was not conducted.
3. The submitted sample releases small part after abuse, thus,according to EN71: Part 1:2014+A1:2018,the following small part warning is required.
“Warning! Not suitable for children under 36 months.Small parts.Chocking hazard.

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APPROPRIATE AGE GRADE DETERMINATION

The Appropriate Age Grade is determined with reference to the EN71: Part 1:2014+A1:2018, European Union Guidance Documents, CEN ISO/TR 8124-8:2016 Safety of toys - Part 8: Age determination guidelines and Age Determination Guidelines: Relating Children's Ages to Toy Characteristics and Play Behavior, September, 2002
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

Symbol	Explanation
NM	The samples are NOT IN COMPLIANCE WITH the requirement of this Subclause
M	The samples are IN COMPLIANCE WITH the requirement of this Subclause
N/A	Not Applicable
NR	Not Requested
NE	Not Evaluated
NP	None Present
P	Present
R	Refer to Comment Section of this report

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

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

Subclause	Requirement	Result
4.1	Material cleanliness	M
4.2	Assembly	N/A
4.3	Flexible plastic sheeting	N/A
4.4	Toy Bags	N/A
4.5	Glass	N/A
4.6	Expanding materials	N/A
4.7 & 7.6	Edges	M
4.8 & 7.6	Points and metallic wires	M
4.8e	Splinters	M
4.9	Protruding parts	N/A
4.10.1	Folding and sliding mechanisms	N/A
4.10.2	Driving mechanisms	N/A
4.10.3	Hinges	N/A
4.10.4	Springs	N/A
4.11	Mouth actuated toys and other toys intended to be put in the mouth	N/A
4.12 & 7.3	Balloons	N/A
4.13 & 7.9	Cord of toy kites and other flying toys	N/A
4.14.1	Toys which a child can enter	N/A
4.14.2 & 7.8	Masks and helmets	N/A
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	N/A
4.15.1.3	Toys propelled by child – Strength	N/A
4.15.1.4	Toys propelled by child – Stability	N/A
4.15.1.5	Toys propelled by child – Braking	N/A
4.15.1.6	Toys propelled by child - Transmission	N/A
4.15.1.7	Toys propelled by child – insertion mark	N/A
4.15.1.8	Electrically-driven ride-on toys	N/A
4.15.2	Toy bicycles	
4.15.2.2 & 7.15	Toy bicycles – Warnings and instructions for use	N/A
4.15.2.3	Toy bicycles – Braking	N/A
4.15.3 & 7.16 & 7.19	Rocking horses and similar toys	N/A
4.15.4 & 7.16	Toys not propelled by child	N/A
4.15.5 & 7.18	Toy scooters	N/A
4.16	Heavy immobile toys	N/A
4.17.2	All projectiles	N/A
4.17.3 & 7.7	Projectile toys with stored energy	N/A
4.17.4 & 7.26	Certain projectiles toys without stored energy	N/A
4.18 & 7.4	Aquatic toys and inflatable toys	N/A
4.19 & 7.13 & 7.14	Percussion caps	N/A
*4.20.2.1- 4.20.2.8, 4.20.2.10, 4.20.2.12	Acoustics	N/A

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

Subclause	Requirement	Result
4.20.2.9, 4.20.2.11 & 7.14	Acoustics – percussion toys & cap-firing toys	N/A
4.21	Toys containing a non-electrical heat source	N/A
4.22 & 7.2	Small balls	N/A
4.23	Magnet	
4.23.2 a, b & c	Toy other than magnetic / electrical experimental sets intended for children over 8 years	N/A
4.23.3 & 7.20	Magnetic / electrical experimental sets intended for children over 8 years	N/A
4.24	Yo-yo ball	N/A
4.25	Toys attached to food	N/A
4.26	Toy Disguise Costumes	N/A
4.27.1	Flying toys – General	N/A
4.27.2 & 7.25.1	Rotors and propellers on flying toys	N/A
4.27.3 & 7.25.2	Rotors and propellers on remote controlled flying toys	N/A
	FOR TOYS INTENDED FOR CHILDREN UNDER 36 MONTHS	
5.1	General	N/A
5.1a	Small parts – as received	N/A
5.1b	Small parts, sharp points, sharp edges – after tests	N/A
5.1c	Cross section <2mm metal points & wires	N/A
5.1e	Toys contain glue	N/A
5.1f	Casing of toys	N/A
5.2	Fillings, coverings and seams	N/A
5.3	Adhesion of plastic sheeting	N/A
5.4.2	Cords and chains in toys intended for children under 18 months	N/A
5.4.3 & 7.22	Cords and chains in toys intended for children of 18 months or over but under 36 months	N/A
5.4.4	Fixed loops, tangled loops and nooses	N/A
5.4.5	Cords and chains on pull along toys	N/A
5.4.6 & 7.21	Electrical cables	N/A
5.4.7	Cross-sectional dimension of certain cords	N/A
5.4.8	Self-retracting cords	N/A
5.4.9 & 7.11 & 7.23	Toys attached to or intended to be strung across a cradle, cot or perambulator	N/A
5.5 & 7.12	Liquid filled toys	N/A
5.6	Electrically driven toys	N/A
5.7	Glass and porcelain	N/A
5.8	Shape and size	N/A
5.9 & 7.17	Monofilament fibres	N/A
5.10	Small balls	N/A
5.11	Play figures	N/A
5.12	Hemispheric shaped toys	N/A
5.13	Suction cups	N/A
5.14	Straps intended to be worn fully or partially around the neck	N/A
5.15 & 7.24	Sledges with cords for pulling	N/A
6	Packaging	N/A

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

Subclause	Requirement	Result
	WARNINGS, INSTRUCTIONS FOR USE	
7.1	General	SEE NOTE 2
7.2	Toys not intended for children under 36 months	SEE NOTE 2&3
7.5	Functional toys	SEE NOTE 2

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

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				

FLAMMABILITY (EN 71 PART 2: 2020)

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

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	-	-

Tested Component(s) Breakdown List

Test Item	Description	Location	Style
1	Blue oxford fabric	-	-
2	Pink oxford cloth	-	-
3	Blue zipper fabric	-	-
4	Pink zipper fabric	-	-
5	White leatheroid with white fabric with black print	-	-
6	Silver metal	Zipper head	-
7	Blue plastic	Zipper tooth	-
8	Pink plastic	Zipper tooth	-
9	White plastic	Pen lid	-
10	Green plastic	Pen body	-
11	Yellow plastic	Pen body	-
12	Red plastic	Pen body	-
13	Blue plastic	Pen body	-
14	White fiber	Pen head	-
15	Green ink	-	-
16	Yellow ink	-	-
17	Red ink	-	-
18	Blue ink	-	-
19	Transparent plastic film	on pen core	-

Aromatic Amines Content from Azo Colorants - Regulation (EC) No. 1907/2006 Annex XVII Entry 43, Points 1 & 2

Test Method : I: For textile and others: EN ISO 14362-1:2017.
II: For leather: ISO 17234-1: 2020.
III: For textile and others: EN ISO 14362-3:2017 ; For leather: ISO 17234-2: 2011

Maximum Limit:	**30mg/kg**

Tested Item(s)	Test Method	Result		Unit	Conclusion
		Detected Analyte(s)	Conc.		
1 + 2	I	ND	ND	mg/kg	PASS
3 + 4	I	ND	ND	mg/kg	PASS
5	I	ND	ND	mg/kg	PASS

Note / Key: ND = Not Detected mg/kg = milligram per kilogram

Detection Limit (mg/kg):Each 10

Remark:
1. *Azo colorants that are able to form p-aminoazobenzene, generate aniline and 1,4-phenylenediamine under the condition of test method I. If aniline and/or 1,4-phenylenediamine is not found by test method I, test result for 4-aminoazobenzene (CAS no. 60-09-3) is considered as “Not detected”. Otherwise, the test method III will be

employed to verify the presence of 4-aminoazobenzene.
2. The list of amines in azo dyestuff is summarized in table of Appendix.

List of Aromatic Amines Content From Azo Colorants - Regulation (EC) No. 1907/2006 Annex XVII Entry 43, Points 1 & 2					
No.	**Name of Analytes**	**CAS-No.**	**No.**	**Name of Analytes**	**CAS-No.**
1	o-Toluidine	95-53-4	12	4,4`-Oxydianiline	101-80-4
2	o-Anisidine	90-04-0	13	Benzidine	92-87-5
3	4-Chloroaniline	106-47-8	14	4,4`-Methylenedianiline	101-77-9
4	p-cresidine	120-71-8	15	4,4`-Methylenedi-o-toluidine	838-88-0
5	2,4,5-Trimethylaniline	137-17-7	16	3,3`-Dimethylbenzidine	119-93-7
6	4-Chloro-o-toluidine	95-69-2	17	4,4`-Thiodianiline	139-65-1
7	4-Methyl-m-phenylenediamine	95-80-7	18	3,3`-Dichlorobenzidine	91-94-1
8	4-Methoxy-m-phenylenediamine	615-05-4	19	4,4`-Methylene-bis-(2-chloro-aniline)	101-14-4
9	2-Naphthylamine	91-59-8	20	3,3`-Dimethoxybenzidine	119-90-4
10	4-Aminobiphenyl	92-67-1	21	o-Aminoazotoluene	97-56-3
11	*4-Aminoazobenzene	60-09-3	22	5-Nitro-o-toluidine	99-55-8

Polycyclic Aromatic Hydrocarbons (PAHs) Content – Regulation (EC) No. 1907/2006 Annex XVII Entry 50, Point 5

Test Method : With reference to test method mentioned in German AfPS GS 2019:01 PAK.

Parameter	**Unit**	**Result**				**Maximum Allowable Limit**
		5	7 + 8	9 + 13 + 14	10 + 11 + 12	
Benzo (a) anthracene	mg/kg	ND	ND	ND	ND	0.5
Chrysene	mg/kg	ND	ND	ND	ND	0.5
Benzo (b) fluoranthene	mg/kg	ND	ND	ND	ND	0.5
Benzo (j) fluoranthene	mg/kg	ND	ND	ND	ND	0.5
Benzo (k) fluoranthene	mg/kg	ND	ND	ND	ND	0.5
Benzo (e) pyrene	mg/kg	ND	ND	ND	ND	0.5
Benzo (a) pyrene	mg/kg	ND	ND	ND	ND	0.5
Dibenzo (a,h) anthracene	mg/kg	ND	ND	ND	ND	0.5
Conclusion	-	PASS	PASS	PASS	PASS	-

Parameter	**Unit**	**Result**			**Maximum Allowable Limit**
		15 + 16	17 + 18	19	
Benzo (a) anthracene	mg/kg	ND	ND	ND	0.5
Chrysene	mg/kg	ND	ND	ND	0.5
Benzo (b) fluoranthene	mg/kg	ND	ND	ND	0.5
Benzo (j) fluoranthene	mg/kg	ND	ND	ND	0.5
Benzo (k) fluoranthene	mg/kg	ND	ND	ND	0.5
Benzo (e) pyrene	mg/kg	ND	ND	ND	0.5
Benzo (a) pyrene	mg/kg	ND	ND	ND	0.5

Dibenzo (a,h) anthracene	mg/kg	ND	ND	ND	0.5
Conclusion	-	PASS	PASS	PASS	-

Note / Key :
mg/kg = milligram(s) per kilogram = ppm = part(s) per million
For individual testing - Each of the listed PAHs(mg/kg) : 0.2

ND = Not detected
Detection Limit (mg/kg):

For composite testing - Each of the listed PAHs(mg/kg) : 0.1

Phthalates Content – Reference to regulation (EC) No. 1907/2006 Annex XVII Entry 51 & 52

Test Method : Reference to EN 14372:2004.

Parameter	**CAS No.**	**Unit**	**Maximum Allowable Limit**	**Result**			
	-	-	-	5	7 + 8	9 + 13 + 14	10 + 11 + 12
A. For toys and childcare articles							
DBP	84-74-2	mg/kg	<1000	ND	ND	ND	ND
BBP	85-68-7	mg/kg	<1000	ND	ND	ND	ND
DEHP	117-81-7	mg/kg	<1000	ND	ND	ND	ND
DiBP	84-69-5	mg/kg	<1000	ND	ND	ND	ND
B. Additional requirements for toys and childcare articles, which can be placed in mouth by the children (See remark)							
DnOP	117-84-0	mg/kg	<1000	ND	ND	ND	ND
DINP	28553-12-0&68515-48-0	mg/kg	<1000	ND	ND	ND	ND
DIDP	26761-40-0 & 68515-49-1	mg/kg	<1000	ND	ND	ND	ND
Sum of DBP, BBP, DEHP, DIBP		mg/kg	<1000	ND	ND	ND	ND
Sum of DNOP, DIDP, DINP		mg/kg	<1000	ND	ND	ND	ND
Conclusion	-	-	-	PASS	PASS	PASS	PASS

Parameter	**CAS No.**	**Unit**	**Maximum Allowable Limit**	**Result**		
	-	-	-	15 + 16	17 + 18	19
A. For toys and childcare articles						
DBP	84-74-2	mg/kg	<1000	ND	ND	ND
BBP	85-68-7	mg/kg	<1000	ND	ND	ND
DEHP	117-81-7	mg/kg	<1000	ND	ND	ND
DiBP	84-69-5	mg/kg	<1000	ND	ND	ND
B. Additional requirements for toys and childcare articles, which can be placed in mouth by the children (See remark)						
DnOP	117-84-0	mg/kg	<1000	ND	ND	ND

DINP	28553-12-0&68515-48-0	mg/kg	<1000	ND	ND	ND
DIDP	26761-40-0 & 68515-49-1	mg/kg	<1000	ND	ND	ND
Sum of DBP, BBP, DEHP, DIBP		mg/kg	<1000	ND	ND	ND
Sum of DNOP, DIDP, DINP		mg/kg	<1000	ND	ND	ND
Conclusion	-	-	-	PASS	PASS	PASS

Note / Key:
ND = Not Detected Conc. = Concentration Detection Limit (mg/kg): Each 50

Remark:

The list of phthalates is summarized in table of Appendix

List of Phthalates Content – Reference To Regulation (EC) No. 1907/2006 Annex XVII Entry 51 & 52					
No.	**Name of Analytes**	**CAS-No.**	**No.**	**Name of Analytes**	**CAS-No.**
1	DBP	84-74-2	5	DINP	28553-12-0&68515-48-0
2	BBP	85-68-7	6	DIDP	26761-40-0 & 68515-49-1
3	DEHP	117-81-7	7	DiBP	84-69-5
4	DnOP	117-84-0	-	-	-

Total Cadmium Content in Plastic Material - European Parliament and Council Regulation (EC) No. 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) with its Latest Amendment, Entry 23

Test Method : EN 1122: 2001, Method B

Maximum Limit:	**100 mg/kg**

Test Item(s)	**Result**	**Unit**	**Conclusion**
5	ND	mg/kg	PASS
7 + 8	ND	mg/kg	PASS
9 + 13 + 14	ND	mg/kg	PASS
10 + 11 + 12	ND	mg/kg	PASS
19	ND	mg/kg	PASS

Note / Key:
mg/kg = milligram per kilogram
Detection Limit (mg/kg): 10
ND = Not Detected
MDL = Method Detection Limit

Total Cd Content

Test Method : The sample is comminuted and digested with acid mixtures, then analyzed by AAS technique or ICP-OES .

Parameter	**Unit**	**Result**			**Maximum Allowable Limit**
		6	15 + 16	17 + 18	
Cadmium (Cd)	mg/kg	<10	<10	<10	100
Conclusion	-	PASS	PASS	PASS	-

Note / Key: ND = Not Detected

Migration of Certain Elements - EN71-3:2019+A1:2021

Test Method:European Standard EN71-3:2019+A1:2021

Analyte	Limit: Type III	Result (mg/kg)				
		Sample ID				
		1	2	3	4	5
Boron (B)	15000	<1500	<1500	<1500	<1500	<1500
Aluminium (Al)	28130	<2813	<2813	<2813	<2813	<2813
Chromium III (Cr III)	460	<46	<46	<46	<46	<46
Chromium VI (Cr VI)	0.053	<0.02	<0.02	<0.02	<0.02	<0.02
Manganese (Mn)	15000	<1500	<1500	<1500	<1500	<1500
Cobalt (Co)	130	<13	<13	<13	<13	<13
Nickel (Ni)	930	<93	<93	<93	<93	<93
Copper (Cu)	7700	<770	<770	<770	<770	<770
Zinc (Zn)	46000	<4600	<4600	<4600	<4600	<4600
Arsenic (As)	47	<4.7	<4.7	<4.7	<4.7	<4.7
Selenium (Se)	460	<46	<46	<46	<46	<46
Strontium (Sr)	56000	<5600	<5600	<5600	<5600	<5600
Cadmium (Cd)	17	<1.7	<1.7	<1.7	<1.7	<1.7
Tin (Sn)	180000	<18000	<18000	<18000	<18000	<18000
Organic tin	12	<1.2	<1.2	<1.2	<1.2	<1.2
Antimony (Sb)	560	<56	<56	<56	<56	<56
Barium (Ba)	18750	<1875	<1875	<1875	<1875	<1875
Mercury (Hg)	94	<9.4	<9.4	<9.4	<9.4	<9.4
Lead (Pb)	23	<2.3	<2.3	<2.3	<2.3	<2.3
Conclusion		PASS	PASS	PASS	PASS	PASS

Analyte	Limit: Type III	Result (mg/kg)				
		Sample ID				
		6	7	8	9	10
Boron (B)	15000	<1500	<1500	<1500	<1500	<1500
Aluminium (Al)	28130	<2813	<2813	<2813	<2813	<2813

Chromium III (Cr III)	460	<46	<46	<46	<46	<46
Chromium VI (Cr VI)	0.053	<0.02	<0.02	<0.02	<0.02	<0.02
Manganese (Mn)	15000	<1500	<1500	<1500	<1500	<1500
Cobalt (Co)	130	<13	<13	<13	<13	<13
Nickel (Ni)	930	<93	<93	<93	<93	<93
Copper (Cu)	7700	<770	<770	<770	<770	<770
Zinc (Zn)	46000	<4600	<4600	<4600	<4600	<4600
Arsenic (As)	47	<4.7	<4.7	<4.7	<4.7	<4.7
Selenium (Se)	460	<46	<46	<46	<46	<46
Strontium (Sr)	56000	<5600	<5600	<5600	<5600	<5600
Cadmium (Cd)	17	<1.7	<1.7	<1.7	<1.7	<1.7
Tin (Sn)	180000	<18000	<18000	<18000	<18000	<18000
Organic tin	12	<1.2	<1.2	<1.2	<1.2	<1.2
Antimony (Sb)	560	<56	<56	<56	<56	<56
Barium (Ba)	18750	<1875	<1875	<1875	<1875	<1875
Mercury (Hg)	94	<9.4	<9.4	<9.4	<9.4	<9.4
Lead (Pb)	23	<2.3	<2.3	<2.3	<2.3	<2.3
Conclusion		PASS	PASS	PASS	PASS	PASS

Analyte	Limit: Type III	Result (mg/kg)				
		Sample ID				
		11	12	13	14	19
Boron (B)	15000	<1500	<1500	<1500	<1500	<1500
Aluminium (Al)	28130	<2813	<2813	<2813	<2813	<2813
Chromium III (Cr III)	460	<46	<46	<46	<46	<46
Chromium VI (Cr VI)	0.053	<0.02	<0.02	<0.02	<0.02	<0.02
Manganese (Mn)	15000	<1500	<1500	<1500	<1500	<1500
Cobalt (Co)	130	<13	<13	<13	<13	<13
Nickel (Ni)	930	<93	<93	<93	<93	<93
Copper (Cu)	7700	<770	<770	<770	<770	<770
Zinc (Zn)	46000	<4600	<4600	<4600	<4600	<4600
Arsenic (As)	47	<4.7	<4.7	<4.7	<4.7	<4.7
Selenium (Se)	460	<46	<46	<46	<46	<46
Strontium (Sr)	56000	<5600	<5600	<5600	<5600	<5600
Cadmium (Cd)	17	<1.7	<1.7	<1.7	<1.7	<1.7
Tin (Sn)	180000	<18000	<18000	<18000	<18000	<18000
Organic tin	12	<1.2	<1.2	<1.2	<1.2	<1.2
Antimony (Sb)	560	<56	<56	<56	<56	<56
Barium (Ba)	18750	<1875	<1875	<1875	<1875	<1875
Mercury (Hg)	94	<9.4	<9.4	<9.4	<9.4	<9.4
Lead (Pb)	23	<2.3	<2.3	<2.3	<2.3	<2.3
Conclusion		PASS	PASS	PASS	PASS	PASS

Analyte	Limit: Type II	Result (mg/kg)			
		Sample ID			
		15	16	17	18

Boron (B)	300	<30	<30	<30	<30
Aluminium (Al)	560	<56	<56	<56	<56
Chromium III (Cr III)	9.4	<0.94	<0.94	<0.94	<0.94
Chromium VI (Cr VI)	0.005	<0.005	<0.005	<0.005	<0.005
Manganese (Mn)	300	<30	<30	<30	<30
Cobalt (Co)	2.6	<0.26	<0.26	<0.26	<0.26
Nickel (Ni)	18.8	<1.88	<1.88	<1.88	<1.88
Copper (Cu)	156	<15.6	<15.6	<15.6	<15.6
Zinc (Zn)	938	<93.8	<93.8	<93.8	<93.8
Arsenic (As)	0.9	<0.09	<0.09	<0.09	<0.09
Selenium (Se)	9.4	<0.94	<0.94	<0.94	<0.94
Strontium (Sr)	1125	<112.5	<112.5	<112.5	<112.5
Cadmium (Cd)	0.3	<0.03	<0.03	<0.03	<0.03
Tin (Sn)	3750	<375	<375	<375	<375
Organic tin	0.2	<0.02	<0.02	<0.02	<0.02
Antimony (Sb)	11.3	<1.13	<1.13	<1.13	<1.13
Barium (Ba)	375	<37.5	<37.5	<37.5	<37.5
Mercury (Hg)	1.9	<0.19	<0.19	<0.19	<0.19
Lead (Pb)	0.5	<0.05	<0.05	<0.05	<0.05
Conclusion		PASS	PASS	PASS	PASS

Note / Key: Req. = Requirement mg/kg = milligram per kilogram

Remark :
- Test Item(s) was (were) tested according to European Standard EN 71-3: 2019 + A1: 2021, Section 8.
- 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.
-The pH measured shall be reported after migration if it was outside the range of 1.1 to 1.3.
- European Standard EN 71 Part 3: 2019 is currently harmonized under European Parliament and Council Directive 2009/48/EC and will be superseded when European Standard EN 71 Part 3: 2019 + A1: 2021 is harmonized.
- The received sample(s) contained accessible component(s) of less than 10 milligrams by weight on one single sample, therefore such component(s) was (were) not subject to migration of certain elements of European Standard, "Safety of Toys, EN 71 Part 3: 2019 + A1: 2021", as specified in Section 7.1 - Selection of test portions.
- * denotes as result(s) was (were) verified by :
For organic tin content - Test method with reference to European Standard EN 71-3: 2019 + A1: 2021 and reported as tributyltin (TBT) cation.
For Cr VI content - In house ion chromatography analysis.

Benzene Content in Toys or Parts of Toys - European Regulation (EC) No. 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) with Amendment up to EU No. 412/2012, Annex XVII, Entry 5, Point 1

Test Method : Analysis by Headspace Gas Chromatograph Mass Spectrometer (HS-GC-MS).

Parameter	**Unit**	**MDL**	**Result**				**Maximum Allowable Limit**
			5	7 + 8	9 + 13 + 14	10 + 11 + 12	
Benzene	mg/kg	5	ND	ND	ND	ND	5

Conclusion	-	-	PASS	PASS	PASS	PASS	-

Parameter	**Unit**	**MDL**	**Result**				**Maximum Allowable Limit**
			15	16	17	18	
Benzene	mg/kg	5	ND	ND	ND	ND	5
Conclusion	-	-	PASS	PASS	PASS	PASS	-

Parameter	**Unit**	**MDL**	**Result**	**Maximum Allowable Limit**
			19	
Benzene	mg/kg	5	ND	5
Conclusion	-	-	PASS	-

Note / Key:

mg/kg = milligram(s) per kilogram = ppm = part(s) per million
Detection Limit (mg/kg) :5

ND = Not detected ">" = Greater than %= percent
10000mg/kg=1%
EU No.=European Commission Regulation number

COLOURFASTNESS TO RUBBING(EN ISO 105-X12:2016)

	1	2	5	Limit
LENGTH				
DRY	4-5	4-5	4-5	2-3
WET	4-5	4-5	4-5	2-3
WIDTH				
DRY	4-5	4-5	4-5	2-3
WET	4-5	4-5	4-5	2-3
Conclusion	PASS	PASS	PASS	

	3	4	
DRY	4-5	4-5	2-3
WET	4-5	4-5	2-3
Conclusion	PASS	PASS	

COLOURFASTNESS RATING

GRADE 5 NEGLIGIBLE OR NO CHANGE OR STAINING
GRADE 4 SLIGHTLY CHANGED OR STAINED
GRADE 3 NOTICEABLY CHANGED OR STAINED
GRADE 2 CONSIDERABLY CHANGED OR STAINED
GRADE 1 MUCH CHANGED OR STAINED

SAMPLE REFERENCE PHOTO:

-- END OF REPORT --