



TEST REPORT

MID OCEAN BRANDS B.V.

Technical Report: (3222)070-0020

Mar.17,2022

Date Received: Mar.11,2022

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

SAMPLE INFORMATION:

Sample Description:	CRAYON SET	Sample Quantity:	N/A
Vendor:	111041	Style No(s):	IT2172
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:	N/A	Country of Origin:	N/A
Client Specified Age Grade:	OVER 3 YEARS OF AGE	Assortment No.:	N/A
Tested Age Grade:	OVER 3 YEARS OF AGE	Country of Destination:	N/A
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
The flammability requirements of the European Standard "Safety of Toys", EN 71: Part 2: 2020	PASS
Migration of Certain Elements - EN71-3:2019+A1:2021	PASS
Phthalates Content – Reference to regulation (EC) No. 1907/2006 Annex XVII Entry 51 & 52	PASS
Total Cadmium Content & As Applicant's requirement	PASS
Benzene Content – Reference to Regulation (EC) No. 1907/2006 Annex XVII Entry 5, Point 3	PASS

Note:

- The sample is tested as "over 3 years of age" per the client's request.
- 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.
- Remark: The report test data take from report (2421)365-8022 data Mar.14,2022.

BVCPS (ZHEJIANG) GENERAL CONTACT INFORMATION FOR THIS REPORT

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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		



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**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 projectile 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



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(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
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				



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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	NP
4.2	Toys to be worn on the head	NP
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	-	-



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-	Unit	Req.	Result
Test Item(s)	-		7
Category	-	III	III
Parameter	-	-	-
Mass of Trace Amount	g	-	-
Boron (B)	mg/kg	15000	<1500
Aluminium (Al)	mg/kg	28130	<2813
Chromium III (Cr III)	mg/kg	460	<46
Chromium VI (Cr VI)	mg/kg	0.053	<0.020
Manganese (Mn)	mg/kg	15000	<1500
Cobalt (Co)	mg/kg	130	<13
Nickel (Ni)	mg/kg	930	<93
Copper (Cu)	mg/kg	7700	<770
Zinc (Zn)	mg/kg	46000	<4600
Arsenic (As)	mg/kg	47	<4.7
Selenium (Se)	mg/kg	460	<46
Strontium (Sr)	mg/kg	56000	<5600
Cadmium (Cd)	mg/kg	17	<1.7
Tin (Sn)	mg/kg	180000	<18000
Organic tin	mg/kg	12	<12*
Antimony (Sb)	mg/kg	560	<56
Barium (Ba)	mg/kg	18750	<1875
Mercury (Hg)	mg/kg	94	<9.4
Lead (Pb)	mg/kg	23	<2.3
Conclusion	-	-	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.
- No.82/No.88 sample received time is 2022.2.14.



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

Test Method : Extraction with solvent, analysed by Gas Chromatography Mass Spectrometer.

Maximum Allowable Limit:	Sum of DBP, BBP, DEHP, DIBP: 0.1 % Sum of DNOP, DIDP, DINP: 0.1 %
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A. For toys and childcare articles

Parameter	CAS No.	Unit	MDL	Result
				7
Dibutyl phthalate (DBP)	84-74-2	%	0.005	ND
Butyl benzyl phthalate (BBP)	85-68-7	%	0.005	ND
Di-2-ethylhexyl phthalate (DEHP)	117-81-7	%	0.005	ND
Diisobutyl phthalate (DiBP)	84-69-5	%	0.005	ND
Sum	-	%	-	ND
Conclusion	-	-	-	PASS

B. Additional requirements for toys and childcare articles, which can be placed in mouth by the children (See remark)

Parameter	CAS No.	Unit	MDL	Result
				7
Di-n-octyl phthalate (DNOP)	117-84-0	%	0.005	ND
Di-iso-decyl phthalate (DIDP)	26761-40-0	%	0.005	ND
Di-iso-nonyl phthalate (DINP)	28553-12-0	%	0.005	ND
Sum	-	%	-	ND
Conclusion	-	-	-	PASS

Note / Key:

ND = Not Detected

% = percentage

MDL = Method Detection Limit

Remark:

- Toys and childcare articles, which can be placed in mouth by the children, shall meet the requirements of both Part A and B.



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Total Cadmium Content & As Applicant's requirement

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

Maximum Allowable Limit:	100 mg/kg
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Parameter	Unit	MDL	Result	
			1+2+3	4+5+6
Cadmium (Cd)	mg/kg	10	ND	ND
<i>Conclusion</i>	-	-	PASS	PASS

Parameter	Unit	MDL	Result
			7
Cadmium (Cd)	mg/kg	10	ND
<i>Conclusion</i>	-	-	PASS

Note / Key:

ND = Not Detected

MDL = Method Detection Limit

mg/kg = milligram per kilogram

Benzene Content – Reference to Regulation (EC) No. 1907/2006 Annex XVII Entry 5, Point 3

Maximum Allowable Limit :	5mg/kg
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Parameter	Unit	MDL	Result		
			1+2+3	4+5+6	7
Benzene	mg/kg	1	ND	ND	ND
<i>Conclusion</i>	-	-	PASS	PASS	PASS



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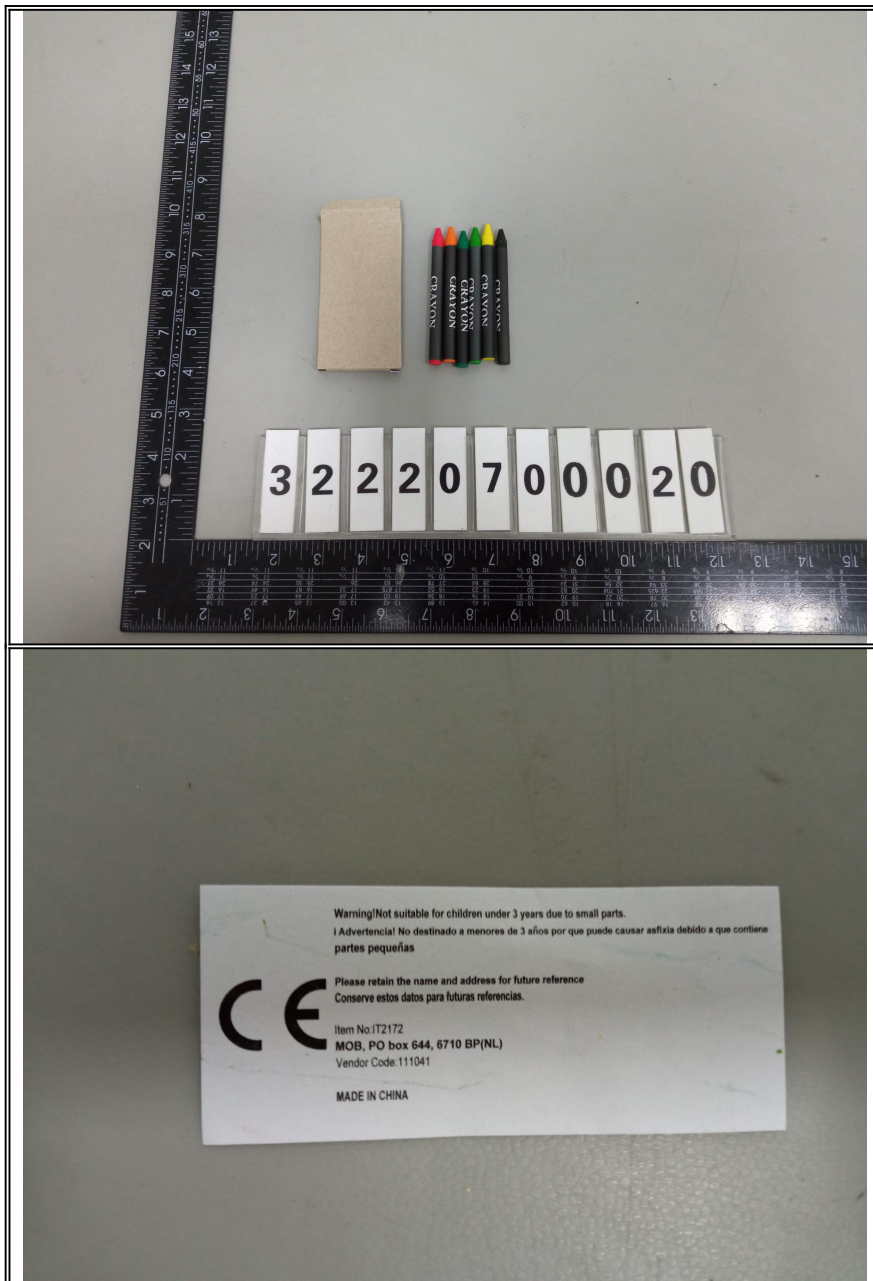
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SAMPLE REFERENCE PHOTO:



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