



TEST REPORT

Test Report # 19A-006051-2 Date of Report Issue: October 17, 2019
Date of Sample Received: October 10, 2019 Pages: Page 1 of 12

CLIENT INFORMATION:

Company: Mid Ocean Brands B.V.
Address: 7/F, Kings Tower, 111 King Lam Street, Cheung Sha Wan, Kowloon, Hong Kong



SAMPLE INFORMATION:

Product Name: Volleyball in matt PVC, size 5
Style No.: - Labeled Age Grade: -
Order No. (PO No.): - Client Request Age Grade: -
Country of Origin: - Recommended Age Grade: 3 years+
Country of Distribution: - Tested Age Grade: 3 years+
Model No.: MO9854
Composition/Main Material: PVC, rubber
Buyer Name: Mid Ocean Brands B.V.
Supplier Name: 100396
Testing Period: 10/14/2019-10/17/2019

OVERALL RESULT:

PASS

Please refer to the following pages for test result summary and appropriate notes.

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The test result(s) and conclusion(s) in this report relate to the sample(s) tested as described herein.
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TEST RESULTS SUMMARY:

At the request of the client, the following tests were conducted:

CONCLUSION	TEST(S) CONDUCTED
PASS	EN 71-3: 2019 Safety of Toys, Migration of Certain Elements
PASS	Regulation (EC) No. 1907/2006 REACH Annex XVII, Item 63 Lead in Substrate Materials
PASS	Regulation (EC) No. 1907/2006 REACH Annex XVII, Item 23 Cadmium in Substrate Materials
PASS	Regulation (EC) No. 1907/2006 REACH Annex XVII, Item 50 Polycyclic Aromatic Hydrocarbon (PAH)
PASS	Regulation (EC) No. 1907/2006 REACH Annex XVII, Item 5 Benzene
PASS	Regulation (EC) No. 1907/2006 REACH Annex XVII as amended, Item 51 and 52 Phthalates – Mouthable (DBP, BBP, DEHP, DIBP, DnOP, DINP, DIDP)
PASS	EN71-1:2014+A1:2018 Safety of toys - Part 1: Mechanical and physical properties
PASS	EN71-2:2011+A1:2014 Safety of toys - Part 2: Flammability

Remark: Test results are transferred from test report no. 19A-006051-1 date: 10/17/2019



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**DETAILED RESULTS:****EN 71-3: 2019 Safety of Toys, Migration of Certain Elements**

Test Method: EN 71-3:2019

Analytical Method: Inductively Coupled Plasma-Mass Spectrometry

Category III: Scraped-off materials

Specimen No.	2	3	4	5	RL (mg/kg)	Soluble Limit (mg/kg)
Test Item	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)		
Aluminum (Al)	ND	ND	ND	ND	50	70 000
Antimony (Sb)	ND	ND	ND	ND	10	560
Arsenic (As)	ND	ND	ND	ND	10	47
Barium (Ba)	ND	ND	93	ND	50	18 750
Boron (B)	ND	ND	ND	ND	50	15 000
Cadmium (Cd)	ND	ND	ND	ND	5	17
Chromium III (Cr III)^	ND	ND	ND	ND	0.02	460
Chromium VI (Cr VI)^	ND	ND	ND	ND	0.02	0.053
Cobalt (Co)	ND	ND	ND	ND	10	130
Copper (Cu)	ND	ND	ND	ND	50	7 700
Lead (Pb)	ND	ND	ND	ND	10	23
Manganese (Mn)	ND	ND	ND	ND	50	15 000
Mercury (Hg)	ND	ND	ND	ND	10	94
Nickel (Ni)	ND	ND	ND	ND	50	930
Selenium (Se)	ND	ND	ND	ND	10	460
Strontium (Sr)	ND	ND	ND	ND	50	56 000
Tin (Sn)	ND	ND	ND	ND	1	180 000
Organic Tin^^	ND	ND	ND	ND	1	12
Zinc (Zn)	ND	ND	ND	ND	50	46 000
Conclusion	PASS	PASS	PASS	PASS		

Note:

mg/kg = Milligrams per kilogram

LT = Less than

ND = Not detected. Result value is less than reporting limit (RL).

^Soluble Chromium is reported when the soluble chromium result below the chromium VI limit.

^^ Soluble Tin is reported when the result is below the adjusted soluble organic tin limit 1 mg/kg.



**DETAILED RESULTS:****Regulation (EC) No. 1907/2006 REACH Annex XVII, Item 63 Lead in Substrate Materials**

Test Method: CPSC-CH-E1001-08.3 (Metal) and/or CPSC-CH-E1002-08.3 (Non-Metal)

Analytical Method: Inductively Coupled Plasma-Optical Emission Spectrometry

Specimen No.	1	2+3+4	5	6	---	Limit (mg/kg)
Test Item	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	
Total Lead (Pb)	ND	ND	18	ND	---	500
Conclusion	PASS	PASS	PASS	PASS	---	

Note:

mg/kg = Milligrams per kilogram

LT = Less than

ND = Not detected (Reporting Limit = 15 mg/kg)

Composite results are based on specimen of least mass resulting in highest potential concentration.



**DETAILED RESULTS:****Regulation (EC) No. 1907/2006 REACH Annex XVII, Item 23 Cadmium in Substrate Materials**

Test Method: ASTM F963-17 Clause 8.3.1

Analytical Method: Inductively Coupled Plasma-Optical Emission Spectrometry

Specimen No.	1	2+3+4	5	6	---	Limit (mg/kg)
Test Item	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	
Total Cadmium (Cd)	ND	ND	ND	ND	---	100
Conclusion	PASS	PASS	PASS	PASS	---	

Note:

mg/kg = Milligrams per kilogram

LT = Less than

ND = Not detected (Reporting Limit = 15mg/kg)

Composite results are based on specimen of least mass resulting in highest potential concentration.



**DETAILED RESULTS:****Regulation (EC) No. 1907/2006 REACH Annex XVII, Item 50 Polycyclic Aromatic Hydrocarbon (PAH)**

Test Method: AfPS GS 2014:01

Analytical Method: Gas Chromatography with Mass Spectrometry

Toys and childcare articles:

Specimen No.		2+3+4	5	---	---	Limit (mg/kg)
Test Item	CAS No.	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	
Benzo [a] pyrene (BaP)	50-32-8	ND	ND	---	---	0.5
Benzo [e] pyrene (BeP)	192-97-2	ND	ND	---	---	0.5
Benzo [a] anthracene (BaA)	56-55-3	ND	ND	---	---	0.5
Chrysene (CHR)	218-01-9	ND	ND	---	---	0.5
Benzo [b] fluoranthene (BbFA)	205-99-2	ND	ND	---	---	0.5
Benzo [j] fluoranthene (BjFA)	205-82-3	ND	ND	---	---	0.5
Benzo [k] fluoranthene (BkFA)	207-08-9	ND	ND	---	---	0.5
Dibenzo [a,h] anthracene (DBA _h A)	53-70-3	ND	ND	---	---	0.5
Conclusion		PASS	PASS	---	---	

Note:

mg/kg = Milligrams per kilogram

LT = Less than

ND = Not detected (Reporting Limit = 0.2 mg/kg)

Composite results are based on specimen of least mass resulting in highest potential concentration.



**DETAILED RESULTS:****Regulation (EC) No. 1907/2006 REACH Annex XVII, Item 5 Benzene**

Test Method: In-House Method

Analytical Method: Headspace Gas Chromatography with Mass Spectrometry

Specimen No.		2+3+4	5	---	---	Limit (mg/kg)
Test Item	CAS No.	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	
Benzene	71-43-2	ND	ND	---	---	5
Conclusion		PASS	PASS	---	---	

Note:

mg/kg = Milligrams per kilogram

LT = Less than

ND = Not detected (Reporting Limit = 1 mg/kg)

Composite results are based on specimen of least mass resulting in highest potential concentration.



**DETAILED RESULTS:****Regulation (EC) No. 1907/2006 REACH Annex XVII as amended, Item 51 and 52 Phthalates – Mouthable (DBP, BBP, DEHP, DIBP, DnOP, DINP, DIDP)**

Test Method: CPSC-CH-C1001-09.4

Analytical Method: Gas Chromatography with Mass Spectrometry

Specimen No.		2+3+4	5	---	Limit (mg/kg)
Test Item	CAS No.	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	
Dibutyl phthalate (DBP)	84-74-2	ND	ND	---	1000
Benzyl butyl phthalate (BBP)	85-68-7	ND	ND	---	1000
Di-(2-ethylhexyl) phthalate (DEHP)	117-81-7	ND	ND	---	1000
Diisobutyl phthalate (DIBP)	84-69-5	ND	ND	---	1000
Sum of DBP, BBP, DEHP, DIBP		ND	ND	---	1000
Di-n-octyl phthalate (DnOP)	117-84-0	ND	ND	---	
Diisononyl phthalate (DINP)	28553-12-0 68515-48-0	ND	ND	---	
Diisodecyl phthalate (DIDP)	26761-40-0 68515-49-1	ND	ND	---	
Sum of DnOP, DINP, DIDP		ND	ND	---	1000
Conclusion		PASS	PASS	---	

Note:

mg/kg (Milligrams per kilogram) = ppm (Parts per million) = 0.0001 % m/m (Percent by mass)

LT = Less than

ND = Not detected (Reporting Limit = 150 mg/kg)

Composite results are based on specimen of least mass resulting in highest potential concentration.



**DETAILED RESULTS:****EN 71-1:2014+A1:2018 Safety of toys - Part 1: Mechanical and physical properties**

Clause	Test	Conclusion
4.1	Material cleanliness	PASS
4.7	Edges	PASS
4.8	Points and metallic wires	PASS
6	Packaging	PASS
7	Warnings, markings and instructions for use	
7.1	General	PASS
7.2	Toys not intended for children under 36 months	PASS

EN71-2:2011+A1:2014 Safety of toys - Part 2: Flammability

Test	Observation	Conclusion
4.1 General	No visual signs of Cellulose Nitrate.	PASS



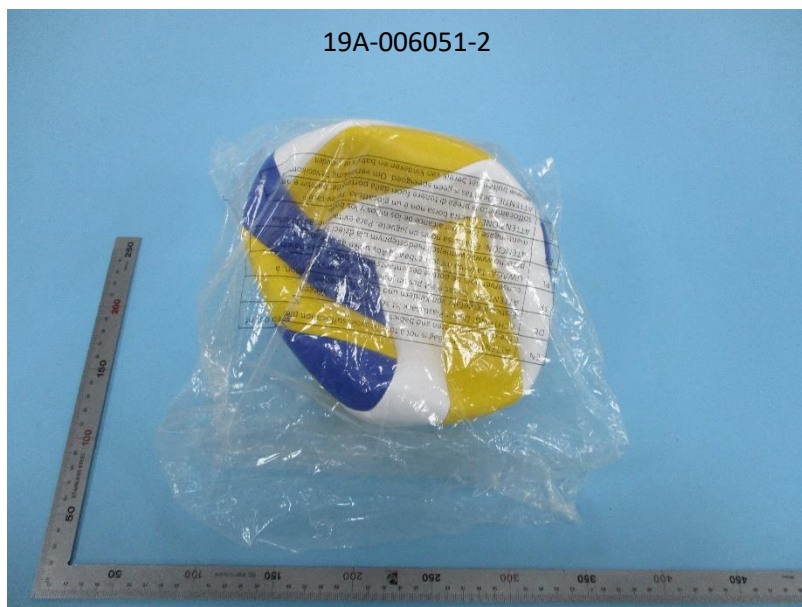
**SPECIMEN DESCRIPTION:**

Specimen No.	Specimen Description	Location
1	Silvery metal	Inflation needle
2	White synthetic leather	Main body
3	Blue synthetic leather	Main body
4	Yellow synthetic leather	Main body
5	Black soft plastic	Air hole
6	Black soft plastic	Liner



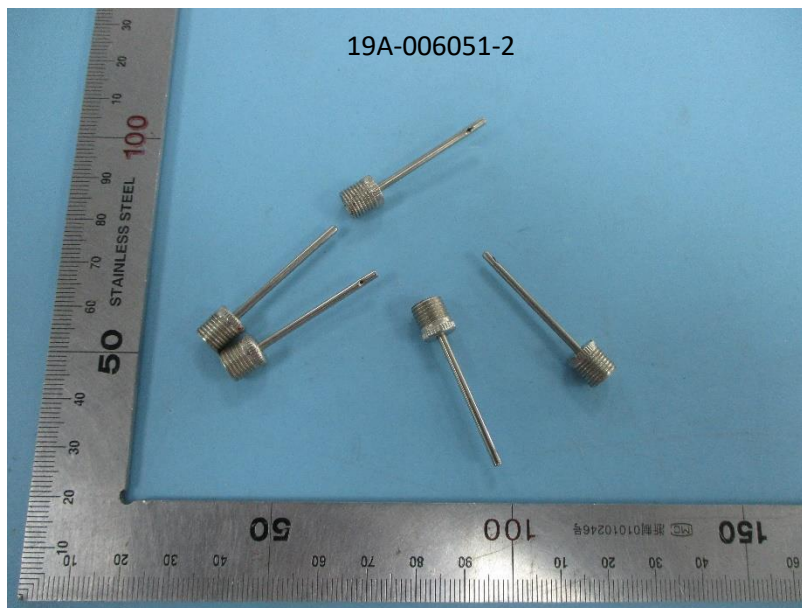


SAMPLE PHOTO:





SAMPLE PHOTO:



-End Report-

