

## TEST REPORT

Test Report # 21A-023342(A1) Date of Report Issue: December 15, 2021  
Date of Sample Received: December 7, 2021 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: soccer ball in PVC  
Style No.: MO9788 Labeled Age Grade: -  
Order No.(PO No.): - Client Request Age Grade: 3 years+  
Country of Origin: - Recommended Age Grade: -  
Country of Distribution: Europe Tested Age Grade: 3 years+  
Composition/Main Material: PVC,steel  
Testing Period: 12/08/2021-12/15/2021

### OVERALL RESULT:

**PASS**

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

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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+A1:2021 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 5 Benzene
PASS	Regulation (EC) No. 1907/2006 REACH Annex XVII, Item 50 Polycyclic Aromatic Hydrocarbon (PAH)
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	EN 71-1:2014+A1:2018 Safety of Toys: Mechanical & Physical Properties
PASS	EN 71-1:2014+A1:2018 Safety of Toys: Labeling Review
PASS	Directive 2009/48/EC Toys Labeling Review
PASS	EN 71-2:2020 Safety of Toys: Flammability



**DETAILED RESULTS:**

**EN 71-3: 2019+A1:2021 Safety of Toys, Migration of Certain Elements**

Test Method: EN 71-3:2019+A1:2021

Analytical Method: Inductively Coupled Plasma-Mass Spectrometry

Category III: Scraped-off materials

Specimen No.	1	2	3	---	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	---	50	28 130
Antimony (Sb)	ND	ND	ND	---	10	560
Arsenic (As)	ND	ND	ND	---	10	47
Barium (Ba)	ND	ND	ND	---	50	18 750
Boron (B)	ND	ND	ND	---	50	15 000
Cadmium (Cd)	ND	ND	ND	---	5	17
Chromium III (Cr III)^	ND	ND	ND	---	0.2	460
Chromium VI (Cr VI)^	ND	ND	ND	---	0.05	0.053
Cobalt (Co)	ND	ND	ND	---	10	130
Copper (Cu)	ND	ND	ND	---	50	7 700
Lead (Pb)	ND	ND	ND	---	10	23
Manganese (Mn)	ND	ND	ND	---	50	15 000
Mercury (Hg)	ND	ND	ND	---	10	94
Nickel (Ni)	ND	ND	ND	---	50	930
Selenium (Se)	ND	ND	ND	---	10	460
Strontium (Sr)	ND	ND	ND	---	50	56 000
Tin (Sn)	ND	ND	ND	---	1	180 000
Organic Tin^^	ND	ND	ND	---	3.3	12
Zinc (Zn)	ND	ND	62	---	50	46 000
<b>Conclusion</b>	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.

^^ Organic tin are not necessary to be determined when the Tin concentration is less than calculated limit (3.3 mg/kg) or the components were confirmed to be pure metal.



**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	---	---	---	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	---	---	---	500
<b>Conclusion</b>	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	---	---	---	---	Limit (mg/kg)
Test Item	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	
Total Cadmium (Cd)	ND	---	---	---	---	<b>100</b>
<b>Conclusion</b>	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 5 Benzene**

Test Method: In-House Method

Analytical Method: Headspace Gas Chromatography with Mass Spectrometry

Specimen No.	1	2	3	---	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	ND	---	5
<b>Conclusion</b>	PASS	PASS	PASS	---	

*Note:*

mg/kg = Milligrams per kilogram

LT = Less than

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



**DETAILED RESULTS:**

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

Test Method: AfPS GS 2019:01

Analytical Method: Gas Chromatography with Mass Spectrometry

Toys and childcare articles

Specimen No.		1+2+3	---	---	---	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	---	---	---	<b>0.5</b>
Benzo [e] pyrene (BeP)	192-97-2	ND	---	---	---	<b>0.5</b>
Benzo [a] anthracene (BaA)	56-55-3	ND	---	---	---	<b>0.5</b>
Chrysene (CHR)	218-01-9	ND	---	---	---	<b>0.5</b>
Benzo [b] fluroanthene (BbFA)	205-99-2	ND	---	---	---	<b>0.5</b>
Benzo [j] fluroanthene (BjFA)	205-82-3	ND	---	---	---	<b>0.5</b>
Benzo [k] fluroanthene (BkFA)	207-08-9	ND	---	---	---	<b>0.5</b>
Dibenzo [a,h] anthracene (DBAhA)	53-70-3	ND	---	---	---	<b>0.5</b>
<b>Conclusion</b>		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 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.		1+2+3	---	---	Limit (mg/kg)
Test Item	CAS No.	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	
Dibutyl phthalate (DBP)	84-74-2	ND	---	---	<b>1000</b>
Benzyl butyl phthalate (BBP)	85-68-7	ND	---	---	<b>1000</b>
Di-(2-ethylhexyl) phthalate (DEHP)	117-81-7	ND	---	---	<b>1000</b>
Diisobutyl phthalate (DIBP)	84-69-5	ND	---	---	<b>1000</b>
Sum of DBP, BBP, DEHP, DIBP		ND	---	---	<b>1000</b>
Di-n-octyl phthalate (DnOP)	117-84-0	ND	---	---	
Diisononyl phthalate (DINP)	28553-12-0 68515-48-0	ND	---	---	
Diisodecyl phthalate (DIDP)	26761-40-0 68515-49-1	ND	---	---	
Sum of DnOP, DINP, DIDP		ND	---	---	<b>1000</b>
<b>Conclusion</b>		PASS	---	---	

**Note:**

mg/kg (Milligrams per kilogram) = ppm (Parts per million) = 0.0001 % w/w (Percent by weight)  
 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: Mechanical & Physical Properties**

Mechanical hazards evaluated as described in EN71-1, as applicable.

Clause	Test	Conclusion
4.1	Material cleanliness	PASS
4.7	Edges	PASS
4.8	Points and metallic wires	PASS
4.22	Small balls	PASS
6	Packaging	PASS
7.1	Warning - General	PASS
7.2	Warning for Toys not intended for Children under 36 months	PASS

**Directive 2009/48/EC Toys Labeling Review**

Test	Observation	Conclusion
CE Marking that met the proportions and dimensions as defined in Directive 93/68/EEC should be affixed on the toy or its packaging.	Present on Packaging, height: 7mm	PASS
Name and address of manufacturer or his authorized representative or importer into the community should be affixed on the toy or its packaging. Address of manufacturer or his authorized representatives or importer should be located in EU community.	Present on Packaging	PASS
Type, batch, serial or model number or other element allowing their identification should be provided on toy, packaging or in a document accompanying the toy.	Present on Packaging	PASS
Warnings and safety instructions shall be written in the languages easily understood by consumers of the country in which the toy is to be sold.	Present in English on Packaging	PASS



**DETAILED RESULTS:**

**EN 71-2:2020 Safety of Toys: Flammability**

Flammability test evaluated as described in EN71-2, as applicable.

Test	Observation	Conclusion
4.1 General	No visual signs of Cellulose Nitrate or with similar behaviour in fire as celluloid.	PASS



**SPECIMEN DESCRIPTION:**

Specimen no.	Specimen description	Location
1	Black soft plastic	Main body
2	White soft plastic	Main body
3	Black soft plastic	Air hole
4	Silvery metal	Air needle



**SAMPLE PHOTO:**



-End Report-

