TEST REPORT

Report No.	:	WTF24F09229566A5R2C
Applicant	:	Mid Ocean Brands B.V.
Address	:	7/F., Kings Tower, 111 King Lam Street, Cheung Sha Wan, Kowloon, Hong Kong
Manufacturer	:	115763
Sample Name	:	6 panels washed cotton cap
Sample Model	:	MO2542
Test Requested	:	Refer to next page (s)
Test Method	:	Refer to next page (s)
Test Conclusion	:	**Pass** (Please refer to next pages for details)
Date of Receipt sample	:	2024-09-30 & 2024-10-22 & 2024-11-01 & 2024-11-19 & 2024-12-18 & 2024-12-31
Testing period	:	2024-09-30 to 2024-10-17 & 2024-10-22 to 2024-10-28 & 2024-11-01 to 2024-11-07 & 2024-11-19 to 2024-11-29 & 2024-12-18 to 2024-12-24 & 2024-12-31 to 2025-01-08
Date of Issue	:	2025-02-05
Test Result	:	Refer to next page (s)
Note	:	1) As specified by client, only test the designated sample. 2) As per client's requirement, all results of specimen are quoted from report No. WTF24F09229566A5R1C.

Prepared By:

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Signed for and on behalf of:
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Swing.Liang

WTF24F09229566A5R2C

Summary

Item No.	Test Requested	Test Conclusion
1	Determination of Lead content in the submitted sample in accordance with REACH regulation Annex XVII Entries 63 (EC) No. 1907/2006 and the amendment No. 836/2012 and (EU) 2015/628	**Pass**
2	Determination of Cadmium content in the submitted sample in accordance with REACH regulation Annex XVII Entries 23 (EC) No. 1907/2006 and the amendment No. 552/2009, No. 494/2011, No. 835/2012 and (EU) 2016/217	**Pass**
3	Determination of specified Phthalates content according to Annex XVII Items 51 & 52 of the REACH Regulation (EC) No. 1907/2006 & Amendment No. 552/2009 & No. 2018/2005	**Pass**
4	Determine the specified AZO Colorants contents in the submitted sample in according to the Entries 43 in Annex XVII of the REACH Regulation (EC) No.1907/2006 and the Amendment Regulation (EC) No.552/ 2009 & No.126/ 2013 (previously restricted under Directive 2002/61/EC).	**Pass**
5	Nickel content requirement in Annex XVII Item 27 of the REACH Regulation (EC) No. 1907/2006 & amendment No.552/2009 (formerly known as Directive 94/27/EC and 2004/96/EC)	**Pass**
6	As requested by the applicant, to test Colour Fastness to Rubbing in the submitted sample.	**Pass**

Sample photo:

	
MO2542	**MO2542**
	
MO2542	**MO2542**
	
MO2542	**MO2542**

Test Results:

1) Lead (Pb)

Test Method: With reference to IEC 62321-5:2013, the analysis was performed by ICP-OES.

Test Item	LOQ (mg/kg)	Results (mg/kg)		Limit (mg/kg)
		No.1+No.2	No.3(R1)+No.5+No.6	
Lead(Pb)	2	38*	ND*	500
Conclusion	--	**Pass**	**Pass**	--

Test Item	LOQ (mg/kg)	Results (mg/kg)	Limit (mg/kg)
		No.8	
Lead(Pb)	2	ND	500
Conclusion	--	**Pass**	--

Note:

(1) mg/kg = milligram per kilogram

(2) ND = Not Detected (lower than LOQ)

(3) LOQ = Limit of quantitation

(4) Limit of Lead was quoted from REACH regulation Annex XVII Item 63 (EC) No. 1907/2006 and the amendment No. 836/2012 and (EU) 2015/628.

(5) "*" = Results are calculated by the minimum weight of mixed components.

2) Cadmium (Cd)

Test Method: With reference to IEC 62321-5:2013, the analysis was performed by ICP-OES.

Test Item	**LOQ (mg/kg)**	**Results (mg/kg)**
		No.4+No.7+No.9
Cadmium(Cd)	2	ND*
Conclusion	**--**	**Pass**

Note:

(1) mg/kg = milligram per kilogram

(2) ND = Not Detected (lower than LOQ)

(3) LOQ = Limit of quantitation

(4) Limit of Cadmium according to REACH regulation Annex XVII Item 23 (EC) No. 1907/2006 and the amendment No. 552/2009, No. 494/2011 and No. 835/2012 and (EU) 2016/217.

Category	Limit (mg/kg)
Wet paint	100
Surface coating	1000
Plastic	100
Metal parts of jewellery and hair accessories	100

(5) "*" = Results are calculated by the minimum weight of mixed components.

3) Phthalates

Test Method: With reference to EN14372:2004, by Gas Chromatographic-Mass Spectrometric (GC-MS) analysis.

Test Items	LOQ (%)	Results (%)	Limit (%)
		No.4+No.7+No.9	
Benzyl butyl phthalate (BBP)	0.005	ND*	sum of four phthalates < 0.1
Di (2-ethyl hexyl)- phthalate (DEHP)	0.005	ND*	
Dibutyl phthalate (DBP)	0.005	ND*	
Diisobutyl phthalate (DIBP)	0.005	ND*	
Diisodecyl phthalate (DIDP)	0.01	ND*	sum of three phthalates < 0.1
Diisononyl phthalate (DINP)	0.01	ND*	
Di-n-octyl phthalate (DNOP)	0.005	ND*	
Conclusion	--	**Pass**	--

Note:

DBP= Dibutyl phthalate BBP= Benzyl butyl phthalate DEHP= Bis-(2-ethylhexyl)- phthalate
DINP= Di-isononyl phthalate DNOP= Di-n-octyl phthalate DIDP= Di-isodecyl phthalate
DIBP= Diisobutyl phthalate

(1) % = percentage by weight
(2) ND = Not Detected or lower than limit of quantitation
(3) LOQ = Limit of quantitation
(4) "<" = less than
(5) The above limit was quoted according to Annex XVII Items 51 & 52 of the REACH Regulation (EC) No. 1907/2006 & Amendment No. 552/2009 & No. 2018/2005 (formerly known as Directive 2005/84/EC) for phthalate content in toys and child care articles.
(6) "*" = Results are calculated by the minimum weight of mixed components.

4) AZO

Test Method: With reference to BS EN ISO 14362-1：2017 and BS EN ISO 14362-3：2017, analysis was performed by Gas Chromatographic Mass Spectrometry (GC-MS)

No.	Amines Substances	CAS No.	Limit (mg/kg)	Result (mg/kg)
				No.3(R1)+No.5+No.6
1	4-Aminobiphenyl	92-67-1	30	ND*
2	Benzidine	92-87-5	30	ND*
3	4-chloro-o-Toluidine	95-69-2	30	ND*
4	2-Naphthylamine	91-59-8	30	ND*
5	o-Aminoazotoluene	97-56-3	30	ND*
6	2-Amino-4-nitrotoluene	99-55-8	30	ND*
7	p-Chloroaniline	106-47-8	30	ND*
8	2,4-diaminoanisol	615-05-4	30	ND*
9	4,4’-Diaminodiphenylmethane	101-77-9	30	ND*
10	3,3’-Dichlorobenzidine	91-94-1	30	ND*
11	3,3’-Dimethoxybenzidine	119-90-4	30	ND*
12	3,3’-Dimethylbenzidine	119-93-7	30	ND*
13	3,3’-Dimethyl-4,4’-diaminodiphenylmethane	838-88-0	30	ND*
14	p-cresinin	120-71-8	30	ND*
15	4,4’-Methylen-bis-(2-chloroaniline)	101-14-4	30	ND*
16	4,4’-Oxydianiline	101-80-4	30	ND*
17	4,4’-Thiodianiline	139-65-1	30	ND*
18	o-Toluidine	95-53-4	30	ND*
19	2,4-Toluylendiamine	95-80-7	30	ND*
20	2,4,5 – Trimethylaniline	137-17-7	30	ND*
21	o-anisidine	90-04-0	30	ND*
22	4-aminoazobenzene	60-09-3	30	ND*
23	2,4-Xylidin	95-68-1	30	ND*
24	2,6-Xylidin	87-62-7	30	ND*
--	**Conclusion**	--	--	**Pass**

Note:

- ND = Not Detected or lower than limit of quantitation
- mg/kg=Milligram per kilogram
- Limit of quantitation (mg/kg): Each 5mg/kg
- The CAS-numbers 97-56-3 and 99-55-8 are further reduced to CAS-numbers 95-53-4 and 95-80-7.
- AZO colorants that are able to form 4-aminoazobenzene, generate under the condition of this method aniline and 1,4-phenylenediamine. The presence of these colorants cannot be reliably ascertained without additional information, e.g. the chemical structure of the colorant used.
- “*” = Results are calculated by the minimum weight of mixed components.

5) Nickel release

Test method: With reference BS EN1811: 2011+A1:2015, Nickel content was determined by Inductively Coupled Argon Plasma Spectrometry

Item No.	Sample Area (cm^2)	Volume of Test Solution(ml)	Nickel release (μg/cm²/week)				Conclusion
			Trial 1	Trial 2	Trial 3	Average	
No.8	10.15	15	ND	ND	ND	ND	**Pass**

Note:

(1) μg/cm²/week = microgram per square centimetre per week

(2) Limit of quantitation = 0.05 μg/cm^2/week

(3) ND = Not Detected or lower than limit of quantitation

(4) Interpretation of test results:

Type of sample	Nickel Release(μg/cm²/week)	
	Pass	Fail
Other components in direct and prolonged contact with the skin	<0.88	≥0.88
Post assemblies and body piercings (Post assemblies which are inserted into pierced parts of the human body)	<0.35	≥0.35

6) Colour Fastness to Rubbing

Colour Fastness to Rubbing					
(ISO 105-X12: 2016; Size of rubbing finger: 16mm diameter.)					
		No.3(R1)	**No.5**	**No.6**	**Client's Limit**
Length	Dry staining	3	4-5	4-5	2
	Wet staining	2-3	4-5	4	2
Width	Dry staining	3	4-5	--	2
	Wet staining	2-3	4-5	--	2
Conclusion		**Pass**	**Pass**	**Pass**	--

Colour Fastness to Rubbing					
(ISO 105-X12: 2016; Size of rubbing finger: 16mm diameter.)					
		No.10	**No.11**	**No.12**	**Client's Limit**
Length	Dry staining	3	4	3	2
	Wet staining	2	2	3	2
Width	Dry staining	3	4	3	2
	Wet staining	2	2	2	2
Conclusion		**Pass**	**Pass**	**Pass**	--

Colour Fastness to Rubbing				
(ISO 105-X12: 2016; Size of rubbing finger: 16mm diameter.)				
		No.14	**No.15**	**Client's Limit**
Length	Dry staining	3	4-5	2
	Wet staining	2	3-4	2
Width	Dry staining	3	4-5	2
	Wet staining	2	3-4	2
Conclusion		**Pass**	**Pass**	--

Note:

(1) Grey Scale Rating is based on the 5-step scale of 1 to 5, where 1 is bad and 5 is good.

Description for Specimen:

Specimen No.	Specimen Description
1	Black plastic loop(VELCRO)
2	Black plastic hook(VELCRO)
3(R1)	Dark blue main fabric
4	White sponge
5	Dark blue fabric rim
6	Dark blue fabric rim
7	White plastic sheet
8	Silvery metal rivet
9	Black plastic sheet
10	Blue main fabric
11	Grey main fabric
12	Green main fabric
14	Red main fabric
15	Brown main fabric

Photograph of parts tested:



15	/

Remarks:

1. The results shown in this test report refer only to the sample(s) tested;
2. This test report cannot be reproduced, except in full, without prior written permission of the company;
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====== End of Report ======