TEST REPORT

Reference No.	:	WTF21F10114859C
Applicant	:	Mid Ocean Brands B.V.
Address	:	7/F., Kings Tower, 111 King Lam Street, Cheung Sha Wan, Kowloon, Hong Kong
Manufacturer	:	114103
Sample Name	:	Lanyard with metal hook 20 mm
Model No.	:	MO6423
Test Requested	:	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 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 3) 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). 4) 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) 5) As requested by the applicant, to test Colour Fastness to Rubbing in the submitted sample.
Test Method	:	Please refer to next page (s)
Test Conclusion	:	Please refer to next page (s)
Date of Receipt sample	:	2021-10-27
Date of Test	:	2021-10-27 to 2021-11-09
Date of Issue	:	2021-11-09
Test Result	:	Please refer to next page (s)
Note	:	As specified by client, only test the designated sample.

Remarks:

The results shown in this test report refer only to the sample(s) tested; this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

If the report is not stamped with the accreditation recognized seal, it will only be used for scientific research, education, and internal quality control activities, and is not used for the purpose of issuing supporting data to the society.

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Compiled by: Approved by:

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Test Result:

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	
Lead(Pb)	2	ND	ND	26	500
Conclusion	--	**Pass**	**Pass**	**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.

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.1	No.2
Cadmium(Cd)	2	ND	ND
Conclusion	--	**Pass**	**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

3) 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.1
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.
- The CAS-numbers 95-68-1 and 87-62-7 are not proscribed under REACH Regulation (EC) No 1907/2006

4) 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.3	9.64	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

5) Colour Fastness to Rubbing

Colour Fastness to Rubbing			
(ISO 105-X12: 2016; Size of rubbing finger: 16mm diameter.)			
		No.1	**Client's Limit**
Length	Dry staining	4-5	2-3
	Wet staining	4-5	2-3
Width	Dry staining	--	2-3
	Wet staining	--	2-3
Conclusion		**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.

Test Specimen Description:

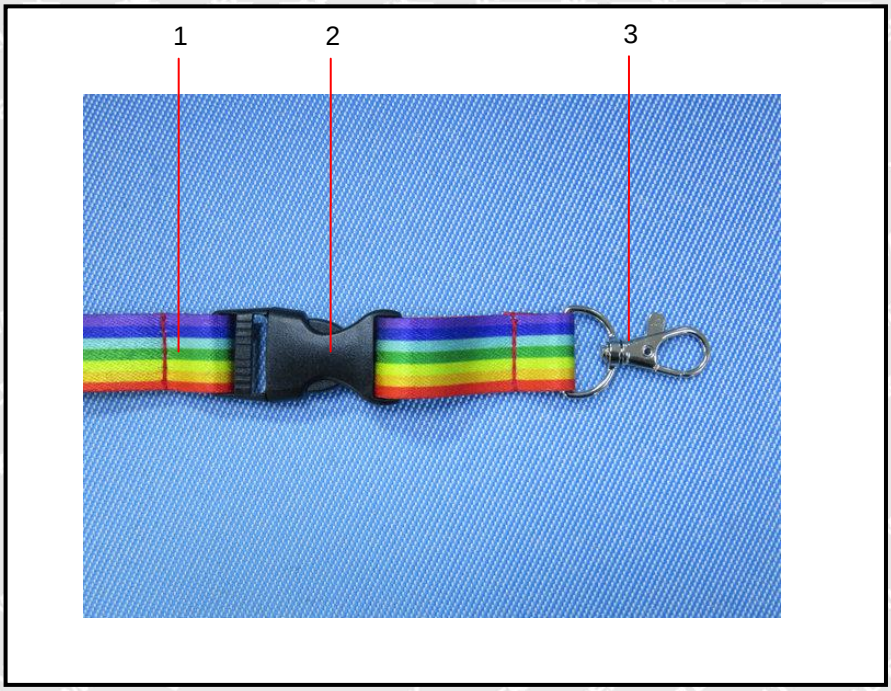
No.1: Multicolour fabric

No.2: Black plastic buckle

No.3: Silvery metal buckle

Sample photo:

Photographs of parts tested:



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